



Netra™ T2000 Server Installation Guide

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www.sun.com

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Preface

The *Netra T2000 Server Installation Guide* provides procedures and information to assist you to install the server into a rack. This document is written for technicians, system administrators, authorized service providers (ASPs), and users who have experience installing and configuring hardware.

How This Document Is Organized

[Chapter 1](#) provides an overview of the features of the Netra™ T2000 server.

[Chapter 2](#) provides background information for the server installation procedures.

[Chapter 3](#) provides instructions for installing the server in an open 4-post rack or a closed cabinet.

[Chapter 4](#) provides instructions for installing the server in an open 2-post rack.

[Chapter 5](#) provides instructions for cabling the server.

[Chapter 6](#) includes instructions for booting the server and for enabling the system controller network management port.

[Appendix A](#) provides a software configuration worksheet.

Using UNIX Commands

This document might not contain information about basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris™ Operating System documentation, which is at:

<http://docs.sun.com>

Shell Prompts

Shell	Prompt
C shell	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

Typographic Conventions

Typeface*	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% su Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this. To delete a file, type <code>rm filename</code> .

* The settings on your browser might differ from these settings.

Related Documentation

Application	Title	Part Number	Format	Location
Administration	<i>Netra T2000 Server Administration Guide</i>	819-5837	PDF	Online
Installation	<i>Netra T2000 Server Installation Guide</i>	819-5838	PDF	Online
Updates	<i>Netra T2000 Server Product Notes</i>	819-5840	PDF	Online
Service	<i>Netra T2000 Server Service Manual</i>	819-5841	PDF	Online
Planning	<i>Netra T2000 Server Site Planning Notes</i>	819-5842	PDF	Online
Compliance	<i>Netra T2000 Server Safety and Compliance Guide</i>	819-5843	PDF	Online
Documentation	<i>Netra T2000 Server Getting Started Guide</i>	819-5844	Printed PDF	Shipping kit Online
Reference	<i>ALOM CMT 1.2 Guide</i>	819-3250	PDF	Online

The documents listed as online are available at:

<http://www.sun.com/products-n-solutions/hardware/docs/>

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Netra T2000 Server Installation Guide, part number 819-5838-10

Netra T2000 Overview

This chapter provides an overview of the features of the Netra T2000 server. The following topics are covered:

- [“Server Views” on page 1](#)
- [“Server Features” on page 3](#)
- [“System Reliability, Availability, and Serviceability” on page 8](#)
- [“Fault Management and Predictive Self-Healing” on page 10](#)
- [“Rackmountable Enclosure” on page 11](#)

Server Views

The following figures show the physical characteristics of the server.



FIGURE 1-1 Netra T2000 Server Front Panel

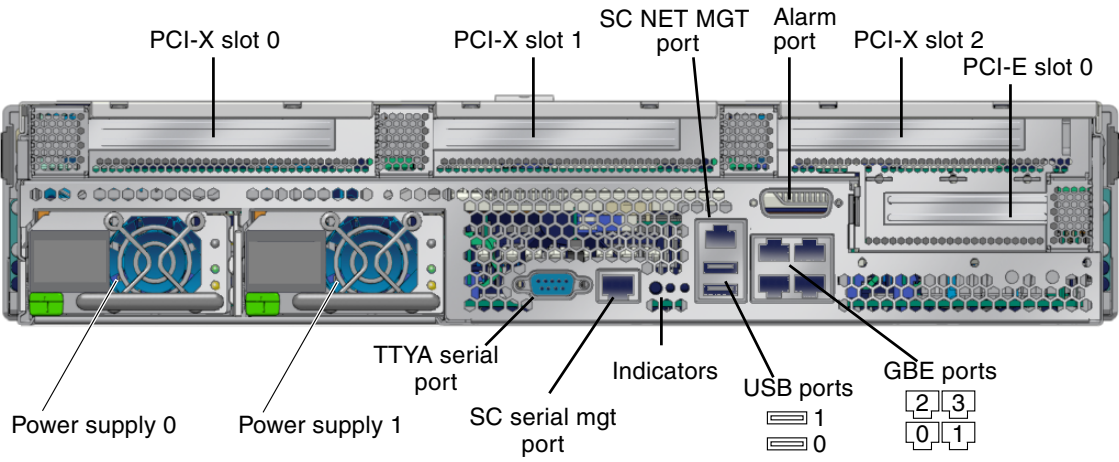


FIGURE 1-2 Netra T2000 Server Rear Panel



FIGURE 1-3 Netra T2000 Server

Server Features

The server is a high-performance, entry-level server that is widely scalable and extremely reliable. The server delivers a variety of options to meet specific business needs. The server has the following features:

TABLE 4 Server Features

Feature	Description
Processor	1 UltraSPARC® T1 multicore processor (4, 6, or 8 cores)
Memory	16 slots that can be populated with one of the following types of DDR2 DIMMs: <ul style="list-style-type: none">• 256 MB (4 GB maximum)• 512 MB (8 GB maximum)• 1 GB (16 GB maximum)• 2 GB (32 GB maximum)
Ethernet ports	4 ports, 10/100/1000 Mb
Internal hard drives	2 SFF SAS hard drives
Other internal peripherals	1 Removable media drive
Alarm	1 Telco alarm
USB ports	2 USB 2.0 connectors
Cooling	3 high-power fans for processor, memory DIMM, and PCI card cooling; and 2 low-power fans for hard drive and removable media drive cooling
PCI interfaces	<ul style="list-style-type: none">• 1 PCI-Express (PCI-Ex8) low-profile expansion slot• 3 PCI-X 133 slots (2 full-length cards and 1 half-length card)
Power	2 dual-redundant, hot-swappable AC/DC power supply units (PSUs)
Remote management	ALOM system controller with a serial port and a 10/100 Mb Ethernet port
Firmware	Firmware comprising: <ul style="list-style-type: none">• OpenBoot™ PROM for system settings and power-on self test (POST) support• ALOM for remote management
Cryptography	Hardware-assisted cyptographic acceleration
Operating system	Solaris 10 3/05 HW2 Operating System preinstalled on disk 0

TABLE 4 Server Features (*Continued*)

Feature	Description
Other software	Java™ Enterprise System with a 90-day trial licence

Chip-Multithreaded Multicore Processor and Memory Technology

The UltraSPARC T1 multicore processor is the basis of the server. The UltraSPARC T1 processor is based on chip-multithreading (CMT) technology that is optimized for highly threaded transactional processing. The UltraSPARC T1 processor improves throughput while using less power and dissipating less heat than conventional processor designs.

Depending on the model purchased, the processor has four, six, or eight UltraSPARC cores. Each core equates to a 64-bit execution pipeline capable of running four threads. The result is that the 8-core processor handles up to 32 active threads concurrently.

Additional processor components, such as L1 cache, L2 cache, memory access crossbar, DDR2 memory controllers, and a JBus I/O interface have been carefully tuned for optimal performance. See [FIGURE 1-5](#).

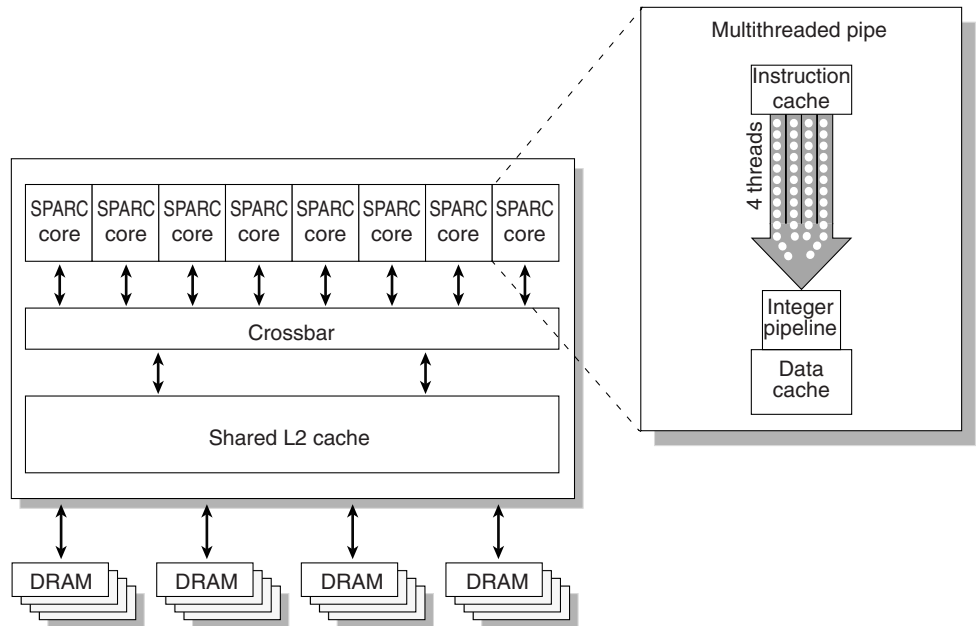


FIGURE 1-5 UltraSPARC T1 Multicore Processor Block Diagram

Performance Enhancements

The server introduces several new technologies with its sun4v architecture and multithreaded UltraSPARC T1 multicore processor.

Some of these enhancements are:

- Large page optimization
- Reduction on TLB misses
- Optimized block copy

Preinstalled Solaris Operating System

The server is preinstalled with the Solaris 10 HW 3/05 Operating System (Solaris OS), and offers the following Solaris OS features:

- Stability, high performance, scalability, and precision of a mature 64-bit operating system
- Support for over 12,000 leading technical and business applications

- Solaris containers – Isolate software applications and services using flexible, software-defined boundaries
- DTrace – A comprehensive dynamic tracing framework for tuning applications and troubleshooting systemic problems in real time
- Predictive self-healing – Capability that automatically diagnoses, isolates, and recovers from many hardware and application faults
- Security – Advanced security features designed to protect the enterprise at multiple levels
- Network performance – Completely rewritten TCP/IP stack dramatically improves the performance and scalability of your networked services

Preloaded Java Enterprise System Software

The server is preinstalled with Java Enterprise System software and includes a free 90-day evaluation license for the following Java Enterprise System software applications:

- Access Manager – A security foundation that helps manage secure access to an enterprises' web applications by offering single sign-on (SSO) as well as enabling federation across trusted networks.
- Application Server – Provides a Java 2 Platform, Enterprise Edition (J2EE™ platform) 1.4 compatible platform for developing and delivering server-side Java applications and web services.
- Calendar Server – A web-based tool that facilitates team collaboration by enabling users to manage and coordinate appointments, events, tasks, and resources.
- Cluster software – Delivers high availability to enterprise system applications.
- Directory Server – User-management infrastructure for enterprises that manage high volumes of user information by providing a centralized repository for storing and managing user profiles and access privileges, as well as application and network resource information.
- Directory Proxy Server – Provides secure firewall-like services for the Directory Server.
- Instant Messaging – A standards-based, real-time communication and collaboration application.
- Message Queue – An enterprise-level message server using a standards-based (JMS) messaging solution.
- Messaging Server – A high-performance, highly secure messaging platform that provides security features that help ensure the integrity of communications.
- Portal Server – Provides portal services that identify users through centralized identity services using roles, and policies.

- Web Server – A secure, reliable, easy-to-use web server designed for medium and large business applications.

To continue the benefits of the Java Enterprise System, you can buy a subscription license for a Java Enterprise System Suite, or a combination of Java System Suites.

Hardware-Assisted Cryptography

The UltraSPARC T1 multicore processor provides hardware-assisted acceleration of RSA and DSA cryptographic operations. The Solaris 10 Operating System provides the multithreaded device driver (`ncp` device driver) that supports the hardware-assisted cryptography.

Remote Server Management With ALOM

The Sun Advanced Lights Out Manager (ALOM) feature is a system controller that enables you to interact with your server over a network, or by using a dedicated serial port for connection to a terminal or terminal server. ALOM provides a command-line interface to remotely manage and troubleshoot geographically distributed or physically inaccessible machines. ALOM runs independently of the server and continues to function when the server operating system goes offline or when the server is powered off.

The ALOM 4v software is preinstalled as firmware, and initializes as soon as you apply power to the server. You can customize ALOM to work with your particular installation. You can configure ALOM to send email alerts of hardware failures, hardware warnings, and other events related to the server or to ALOM. ALOM monitors the following server components:

- CPU temperature conditions
- Disk drive status
- Enclosure thermal conditions
- Fan speed and status
- Power supply status
- Voltage conditions

For more information about using ALOM, see the server administration guide.

System Reliability, Availability, and Serviceability

Reliability, availability, and serviceability (RAS) are aspects of a server's design that affect its ability to operate continuously and to minimize the time necessary to service the server.

- Reliability – a server's ability to operate continuously without failures and to maintain data integrity.
- Availability – the ability of a server to recover to an operational state after a failure, with minimal impact.
- Serviceability – the time it takes to restore a server to service following a system failure.

Together, reliability, availability, and serviceability features provide for near continuous server operation.

To deliver high levels of reliability, availability, and serviceability, the server offers the following features:

- Hot-swappable hard drives
- Redundant, hot-swappable power supplies (two)
- Redundant fan units (three) for processor, memory, and PCI card cooling, and redundant fan units (two) for HD and DVD drives
- Environmental monitoring
- Error detection and correction for improved data integrity
- Easy access for most component replacements

For more information about using RAS features, refer to the server administration guide.

Hot-Swappable Components

The server hardware supports hot-swapping of the chassis-mounted hard drives and power supplies. By using the proper software commands, you can install or remove these components while the server is running. Hot-swap technology significantly increases the server's serviceability and availability by providing the ability to replace hard drives and power supplies without service disruption.

Power Supply Redundancy

The server features two redundant hot-swappable power supplies, enabling the server to continue operating should one of the power supplies fail or if one power source fails.

Fan Redundancy

The server has two drive specific fans that work in conjunction with the two power supply fans to provide cooling for the internal disk drives. Additionally, there are three fans to cool the motherboard components.

Environmental Monitoring

The server features an environmental monitoring subsystem protects the server and its components against:

- Extreme temperatures
- Lack of adequate airflow through the server
- Power supply failures
- Hardware faults

Temperature sensors are located throughout the server to monitor the ambient temperature of the server and internal components. The software and hardware ensure that the temperatures within the enclosure do not exceed predetermined safe operating levels. If the temperature observed by a sensor falls below a low-temperature threshold or rises above a high-temperature threshold, the monitoring subsystem software lights the amber Service Required LEDs on the front and rear panel. If the temperature condition persists and reaches a critical threshold, the server initiates a graceful system shutdown. If the ALOM fails, backup sensors protect the server from serious damage, by initiating a forced hardware shutdown.

All error and warning messages are sent to the system console and logged in the ALOM console log file. Service Required LEDs remain lit after an automatic system shutdown to aid in problem diagnosis.

The monitoring subsystem is also designed to detect fan failures. The system features integral power supply fans, as well as one PCI fan and three blowers. If the PCI fan or blower fails, the monitoring subsystem detects the failure and generates an error message to the system console, logs the message in the `/var/adm/messages` file, and lights the Service Required LEDs.

The power subsystem is monitored in a similar fashion and any fault is indicated at the front and rear panel LEDs. Additionally, LEDs located on each power supply light to indicate failures.

Error Correction and Parity Checking

The UltraSPARC T1 multicore processor provides parity protection on its internal cache memories, including tag parity and data parity on the D-cache and I-cache. The internal 3MB L2 cache has parity protection on the tags, and ECC protection on the data.

Advanced ECC, also called *chipkill*, corrects up to 4-bits in error on nibble boundaries, as long as they are all in the same DRAM. If a DRAM fails, the DIMM continues to function.

Fault Management and Predictive Self-Healing

The server features the latest fault management technologies. With the Solaris 10 Operating System (OS), Sun is introducing a new architecture for building and deploying systems and services capable of *Predictive Self-Healing*. Self-healing technology enables Sun servers to accurately predict component failures and mitigate many serious problems before they actually occur. This technology is incorporated into both the hardware and software of the server.

At the heart of the predictive self-healing capabilities is the Solaris Fault Manager, a new service that receives data relating to hardware and software errors, and automatically and silently diagnoses the underlying problem. Once a problem is diagnosed, a set of agents automatically responds by logging the event, and if necessary, takes the faulty component offline. By automatically diagnosing problems, business-critical applications and essential system services can continue uninterrupted in the event of software failures, or major hardware component failures.

Rackmountable Enclosure

The server uses a space-saving 2U-high rackmountable enclosure that can be installed into a variety of industry standard racks.

Preparing for Installation

This chapter provides background information about the server installation procedures.

This chapter contains these topics:

- [“Tools Needed” on page 13](#)
- [“Shipping Kit Inventory List” on page 13](#)
- [“Installation Overview” on page 14](#)
- [“Installing the Air Filter” on page 16](#)
- [“Installing Optional Components” on page 17](#)
- [“Slide Rail Assembly Notes” on page 18](#)
- [“Safety Precautions” on page 20](#)

Tools Needed

- Phillips screwdrivers
- ESD mat and grounding strap

Shipping Kit Inventory List

Standard components of the server are installed at the factory. However, if you ordered options such as a PCI card and monitor, these are shipped to you separately.

Note – Inspect the shipping cartons for evidence of physical damage. If a shipping carton appears damaged, request that the carrier’s agent be present when the carton is opened. Keep all contents and packing material for the agent’s inspection.

Verify that you have received all the parts of your server.

- Server chassis
- 19-inch, 4-post rackmount kit and a slide rail assembly
- Package of mounting screws and nuts in assorted sizes to fit various types of racks and cabinets
- Miscellaneous hardware, cables, connectors, etc
- Cable management arm with six preinstalled cable clips
- Manufacturer's instruction sheet for the cable management arm
- Any optional components that were ordered with the server

Installation Overview

This installation guide provides procedures that must be performed in the following order.

1. Verify that you have received all of the components that ship with your server, as described in the preceding section.
2. Gather configuration information for your server. See your system administrator for specific details, including these parameters:
 - Netmask
 - IP address for the system controller
 - Gateway IP address

See [“Software Configuration Worksheet” on page 93](#).

3. Remove the shipping insert from the bezel and install the air filter. See [“Installing the Air Filter” on page 16](#).
4. Install any optional Sun components into your server before rackmounting. See the server service manual for instructions.
5. Mount the server into a rack or cabinet. See [“4-Post Rackmounting Options” on page 22](#) and [“2-Post Rackmounting Options” on page 56](#).

Note – In the rest of this manual, the term *rack* means either an open rack or a closed cabinet.

6. Connect the chassis grounding cable.
7. Connect the serial, network, and all other data cables to the server. See [“Cabling the Server” on page 67](#).

8. Connect the server to a serial terminal or a terminal emulator (PC or workstation) to display system messages. See [“Powering On the Server for the First Time” on page 77](#).



Tip – The serial terminal or a terminal emulator should be connected, powered on, and ready before you connect the power cables, or you will not see the system messages.

9. Assemble and connect the input power cables to the server and examine the display for any error messages. See [“Powering On the Server for the First Time” on page 77](#).



Caution – There is a potential for electric shock if the server and related equipment are not properly grounded.

Note – The system controller (SC) runs on the 3.3v standby voltage. As soon as power is connected to the server, the system controller immediately powers on, runs diagnostics, and initializes the ALOM firmware.

10. After the system controller boots, access the ALOM command-line interface through the serial management port. See [“To Log Into the System Controller Using the Serial Management Port” on page 80](#).
11. Configure the SC network addresses. See [“To Log Into the System Controller Using the Network Management Port” on page 85](#).

Note – The SC network management port is not operational until you configure network settings for the system controller (through the SC serial management port).

12. Enable the new configuration by resetting the system controller. See [“To Reset the System Controller” on page 84](#).
13. Confirm that the Ethernet connection is attached to the server.
14. Check whether the rotary switch is in the Normal position.
15. Power on the server from a keyboard using the ALOM software. See [“To Power On the Server” on page 86](#).
16. Configure the Solaris OS. See [“Booting the Solaris Operating System” on page 89](#).
The Solaris OS is preinstalled on the server. When you power on, you are automatically guided through the Solaris OS configuration procedure.

17. Install any required patches to the server.

Refer to the server product notes for a list of the required patches.

18. Load additional software from the optional Solaris media kit.

The Solaris media kit (sold separately) includes several CDs containing software to help you operate, configure, and administer your server. Refer to the documentation provided with the media kit for a complete listing of included software and detailed installation instructions.

Installing the Air Filter

The server ships with a protective shipping insert located between the bezel and the front panel. You must remove this protective insert and replace it with an air filter before powering on the server.



Caution – Failure to remove the shipping insert from the front bezel can block the air from flowing through the server, which would seriously damage the server components.

1. Grip the bezel at the two finger holds and rotate it down to its open position (FIGURE 2-1).



FIGURE 2-1 Finger Holds on Bezel

2. Carefully remove the shipping insert from the inside of the bezel.
3. Obtain the air filter that shipped with your server.
4. Snap the new air filter into place in the bezel (FIGURE 2-2).

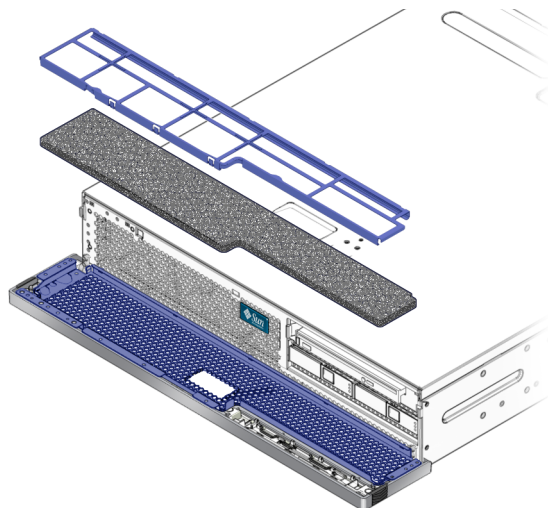


FIGURE 2-2 Installing the Air Filter in the Bezel

5. Close the bezel.

Installing Optional Components

The standard components of the server are installed at the factory. However, if you ordered options such as additional memory or a PCI card, these will be shipped separately. If possible, install these components prior to installing the server in a rack.

Install any optional components shipped with your server.

If you ordered options that are not factory-installed, see the server service manual for installation instructions.

Note – All internal components except disk drives must be installed by qualified service technicians only.



Caution – To protect electronic components from electrostatic damage, which can permanently disable the server or require repair by Sun service technicians, note the following guidelines.

- Place components on an antistatic surface, such as a Sun antistatic discharge mat, an antistatic bag, or a disposable antistatic mat.
- Always wear an antistatic wrist strap connected to a metal surface on the chassis when you work on server components.

Refer to the server service manual for the list of optional components.

Note – The optional component list might be updated at any time. Refer to the SunStore™ web site (<http://store.sun.com>) for the most current list of server supported components.

Slide Rail Assembly Notes

The rackmount kit has two *slide rail assemblies*. A slide rail assembly can be installed on either the right or left side of the rack.

Each slide rail assembly consists of a three-section slide rail and a removable mounting bracket (FIGURE 2-3).

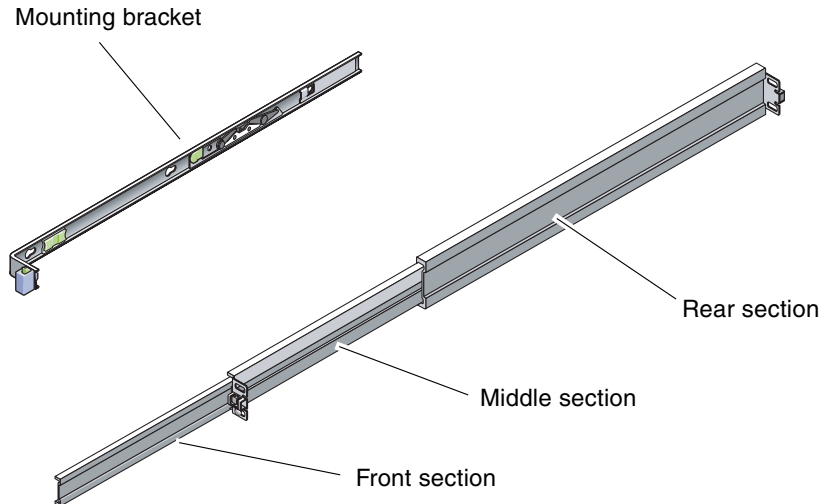


FIGURE 2-3 Sections of the Slide Rail Assembly

- The *front*, *middle*, and *rear* sections form the *slide rail*. The middle and rear sections have holes for mounting screws and adjust to fit rack depths from 24 in. (61 cm) to 36.5 in. (93 cm). The front section can be extended to enable movement of the server out of the rack.
- The removable *mounting bracket* slides 14 in. (36 cm) out of the slide rail, then locks in place. If you unlock the mounting bracket at this point, it slides an additional 12 in. (30 cm) before separating from the slide rail. You can then mount the mounting bracket to the right or left side of the chassis.
- Note that there are a total of five locks (FIGURE 2-4) in a slide rail assembly. Four are on the mounting bracket. One lock is on the front section of the slide rail.

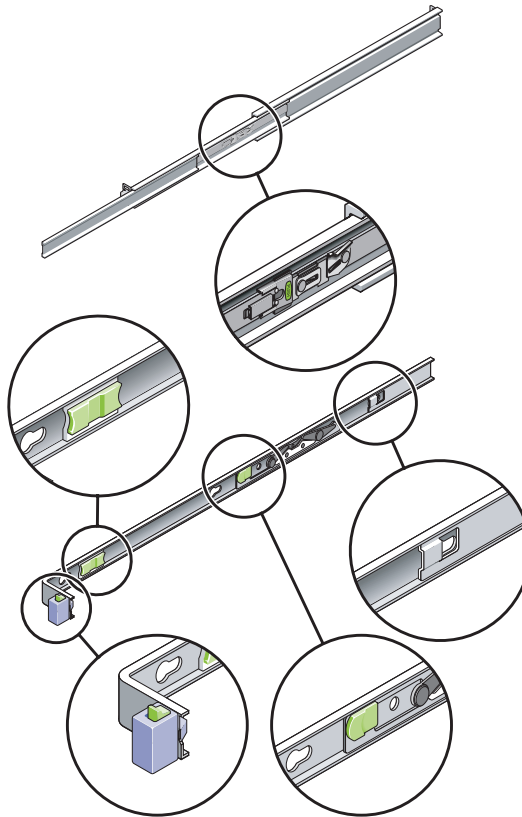


FIGURE 2-4 Locating the Locks on the Slide Rail Assembly

Safety Precautions



Caution – Deploy the antitilt bar on the cabinet or rack before beginning an installation.



Caution – The server weighs approximately 40 lb (18 kg). Two people are required to lift and mount the server into a rack enclosure when using the procedures in this chapter.



Caution – When completing a two-person procedure, always communicate your intentions clearly before, during, and after each step to minimize confusion.

Mounting the Server Into a 4-Post Rack

This chapter provides instructions for installing the server in an open 4-post rack or closed cabinet.

This chapter contains the following sections:

- [“4-Post Rackmounting Options” on page 22](#)
- [“Hardmounting the Server in a 19-Inch 4-Post Rack” on page 22](#)
- [“Mounting the Server in a Sliding Rail Mount 19-Inch 4-Post Rack” on page 26](#)
- [“Hardmounting the Server in a 600-mm 4-Post Rack” on page 33](#)
- [“Installing a Server With a Hardmount in a 19-Inch 4-Post Rack for Use With the Cable Management Assembly” on page 41](#)

Note – References to *left* and *right* are from your viewpoint as you face either the front or rear of the equipment.



Caution – The server is heavy. Two people are required to lift and mount the server into a rack enclosure when following the procedures in this chapter.

4-Post Rackmounting Options

The server ships with a 19-inch, 4-post hardmount rack kit (see [“To Install a Server With a Hardmount 19-Inch 4-Post Rack” on page 22](#) for installation instructions). [TABLE 3-1](#) lists three additional 4-post rackmount kit options that can be ordered from Sun. This chapter provides installation instructions for these rackmount kit options.

TABLE 3-1 Optional Rackmount Kits

Mounting Kit	Installation Instructions
19-inch, 4-post slide mount kit for 600–800 mm cabinet depths	“To Install a Server With a Sliding Rail Mount in a 19-Inch 4-Post Rack” on page 26
600 mm x 600 mm rackmount kit	“To Install a Server With a Hardmount in a 600-mm 4-Post Rack” on page 33
19-inch, 4-post slide rail kit for 800–1000 mm cabinet depths with cable management assembly	“Installing a Server With a Hardmount in a 19-Inch 4-Post Rack for Use With the Cable Management Assembly” on page 41

Note – If you have more than six DC-powered servers in the same rack, you might exceed Telcordia NEBS EMI limits.

Hardmounting the Server in a 19-Inch 4-Post Rack

▼ To Install a Server With a Hardmount 19-Inch 4-Post Rack

The hardmount kit for a 19-inch 4-post rack consists of:

- Two hardmount brackets
- Two rear mount support brackets
- Two rear mount flanges
- Bag of screws

Note – The front-to-back rail spacing must be at least 460 mm (18.11 in.) and not more than 715 mm (28.15 in.) from the outside face of the front rail to the outside face of the back rail.

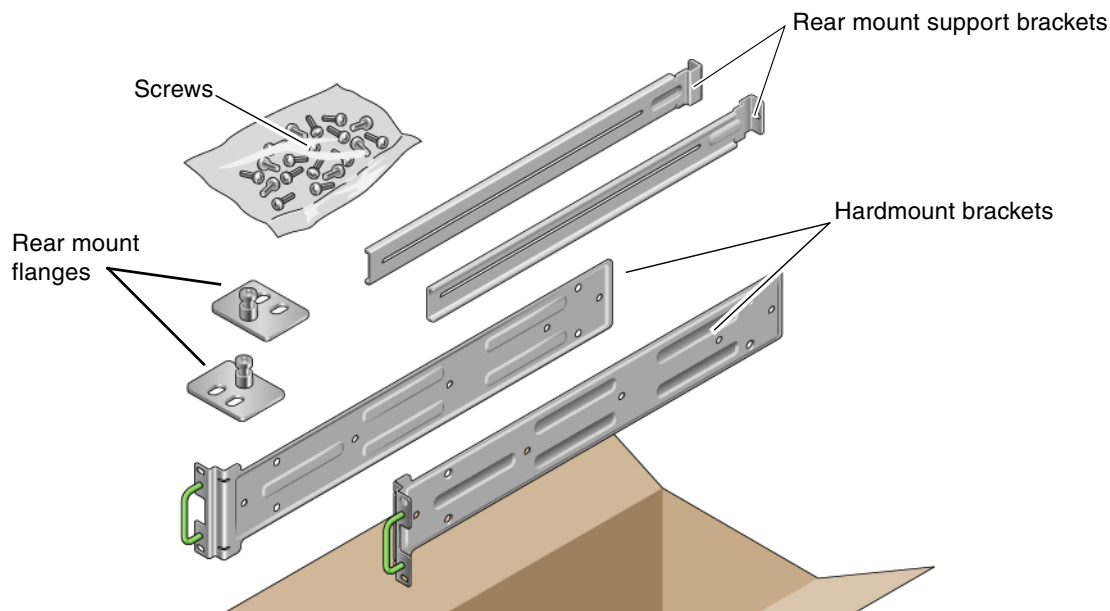


FIGURE 3-1 Contents of the Hardmount 19-Inch 4-Post Kit

TABLE 3-2 19-inch 4-Post Rackmount Screw Kit Contents

Number	Description	Where Used
10	M5 x 8 mm Phillips flathead screws	8 for hardmount brackets, 2 extra
10	M4 x 0.5 mm x 5 mm Phillips panhead screws	4-6 for rear mount brackets, 6-4 extra
10	M5 x 12.7 mm screws	10 for rack, if appropriate
10	M6 x 13 mm screws	10 for rack, if appropriate
9	M6 square clip nuts	9 for rack, if appropriate
12	10-32 x 0.5 in. combo head screws	12 for rack, if appropriate
12	12-24 x 0.5 in. combo head screws	12 for rack, if appropriate

1. Get the hardmount brackets from the rack kit (FIGURE 3-1).

2. Use four of the supplied $M5 \times 8$ mm flathead Phillips screws to secure each of the hardmount brackets to the sides of the server ([FIGURE 3-2](#)).

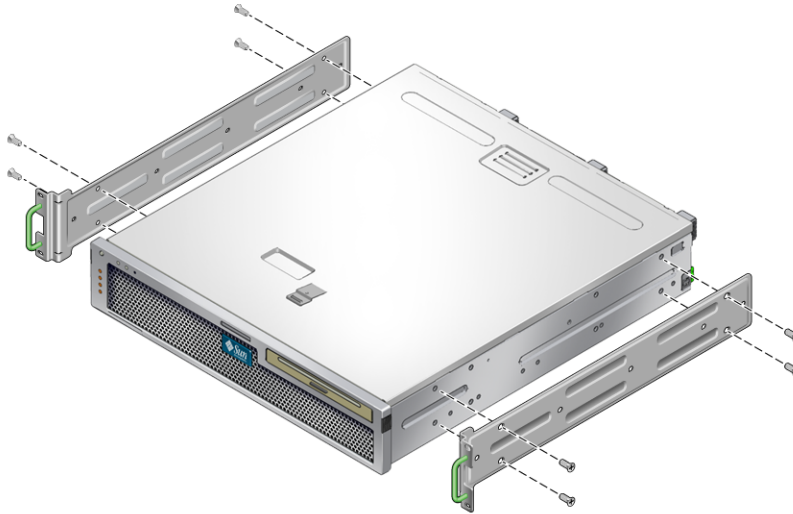


FIGURE 3-2 Securing the Hardmount Brackets to the Server

3. Measure the depth of the rack.
4. Get the two rear mount support brackets from the rack kit ([FIGURE 3-1](#)).
5. Install the rear mount support brackets at the rear of the server, extending the rear mount support brackets to the measured depth of the rack ([FIGURE 3-3](#)).
Use two to three of the supplied $M4 \times 0.5 \times 5$ mm panhead Phillips screws for each bracket, depending on the rack depth.

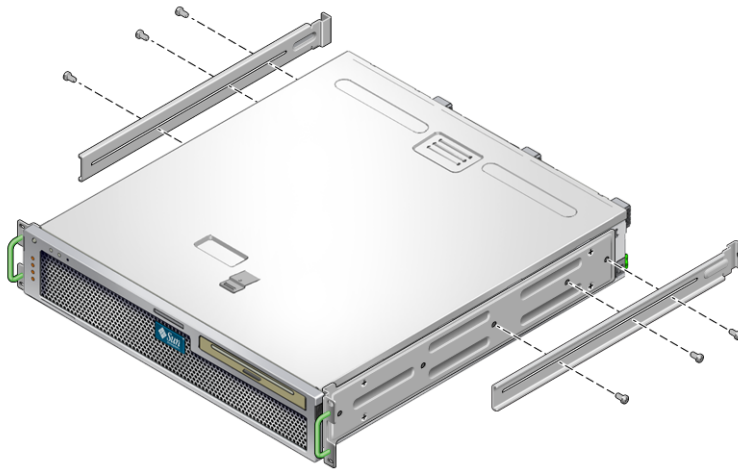


FIGURE 3-3 Attaching the Rear Mount Support Brackets

6. Lift the server to the desired location in the rack.
7. Using two screws per side, secure the front of the hardmount brackets attached to the sides of the server to the front of the rack ([FIGURE 3-4](#)).

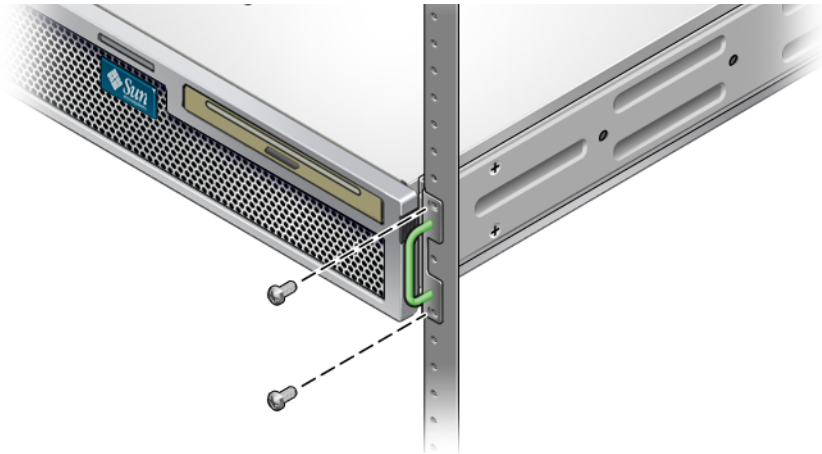


FIGURE 3-4 Securing the Front of the Server to the Rack

8. Get the two rear mount flanges from the rack kit ([FIGURE 3-1](#)).
9. Using two screws for each rear mount support bracket, secure the rear mount support brackets to the rear of the rack ([FIGURE 3-5](#)).

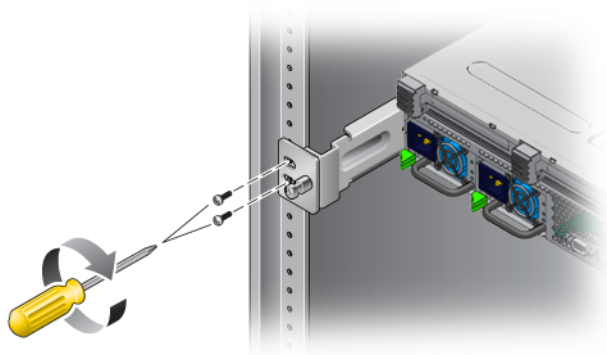


FIGURE 3-5 Securing the Rear of the Server to the Rack

Mounting the Server in a Sliding Rail Mount 19-Inch 4-Post Rack

▼ To Install a Server With a Sliding Rail Mount in a 19-Inch 4-Post Rack

The sliding rail mount kit for a 19-inch 4-post rack consists of:

- Two 19-inch 4-post Telco slide assemblies
- Two short brackets
- Two long brackets
- Four M6 and four 10-32 threaded strips
- Two extension brackets
- Bag of screws

Note – The front-to-back rail spacing must be at least 392 mm (15.43 in.) and not more than 863.6 mm (34 in.) from the outside face of the front rail to the outside face of the back rail.

You also need the hardmount brackets from the standard rackmount kit that came with the server ([FIGURE 3-1](#)).

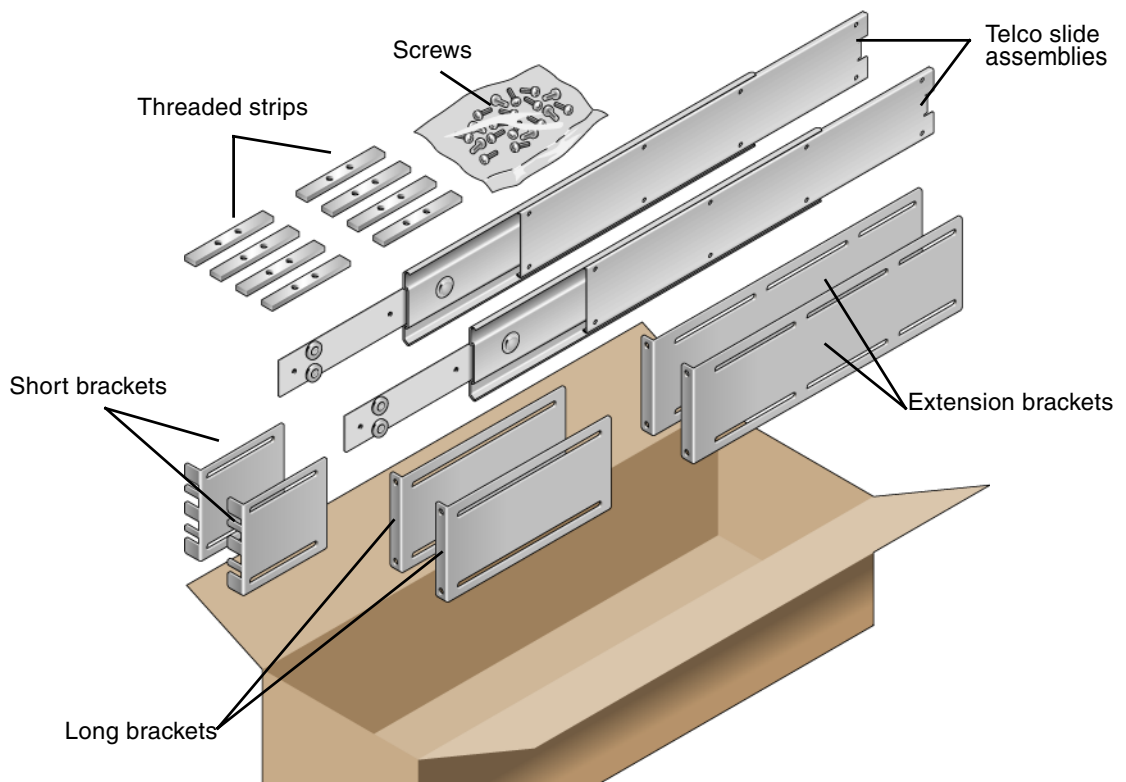


FIGURE 3-6 Contents of the Sliding Rail 19-Inch 4-Post Kit

TABLE 3-3 Sliding Rail 19-inch 4-Post Rackmount Screw Kit Contents

Number	Description	Where Used
10	M4 x 0.5 mm x 5 mm Phillips panhead screws	8 for glides, 2 extra
10	M6 brass collar screws	4 for short brackets, 4 for long brackets, 2 extra
8	M5 panhead screws, nuts, plain washers and star washers	8 for slides
10	M5 x 12.7 mm screws	10 for rack, if appropriate
12	M6 x 13 mm screws	10 for rack, if appropriate
9	M6 square clip nuts	9 for rack, if appropriate

TABLE 3-3 Sliding Rail 19-inch 4-Post Rackmount Screw Kit Contents *(Continued)*

Number	Description	Where Used
10	10-32 collar screws 4 short, 4 long, 2 extra	8 for racks with 10-32 holes, if appropriate
12	10-32 x 0.5 in. combo head screws	12 for rack, if appropriate
12	12-24 x 0.5 in. combo head screws	12 for rack, if appropriate

1. **Get the hardmount brackets and M5 × 8 mm flathead Phillips screws from the standard rack kit (FIGURE 3-1).**
These hardmount brackets and screws are shipped with the standard server ship kit, not as part of the sliding rail 19-inch 4-post rackmount ship kit.
2. **Use four of the supplied M5 × 8 mm flathead Phillips screws to secure each of the hardmount brackets to the sides of the server (FIGURE 3-7).**

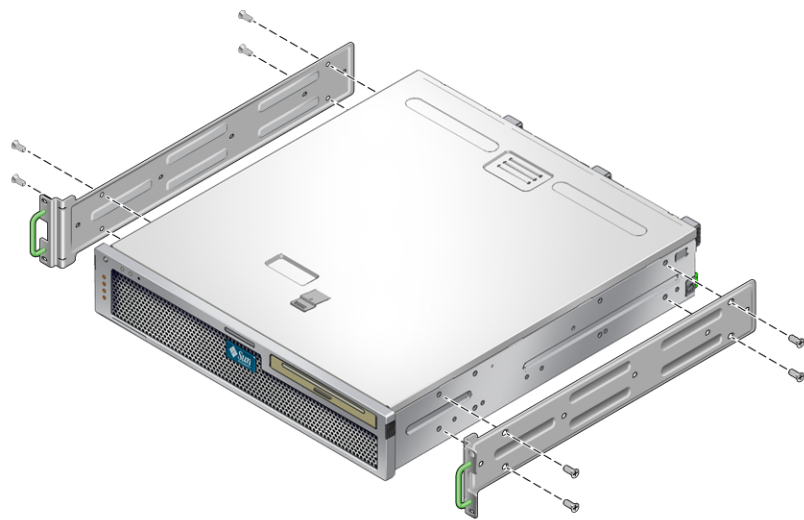


FIGURE 3-7 Securing the Hardmount Bracket to the Server

3. **Get the Telco slide assemblies from the rack kit (FIGURE 3-6).**
4. **Press in the button on each slide and pull the glide completely out of the slide (FIGURE 3-8).**

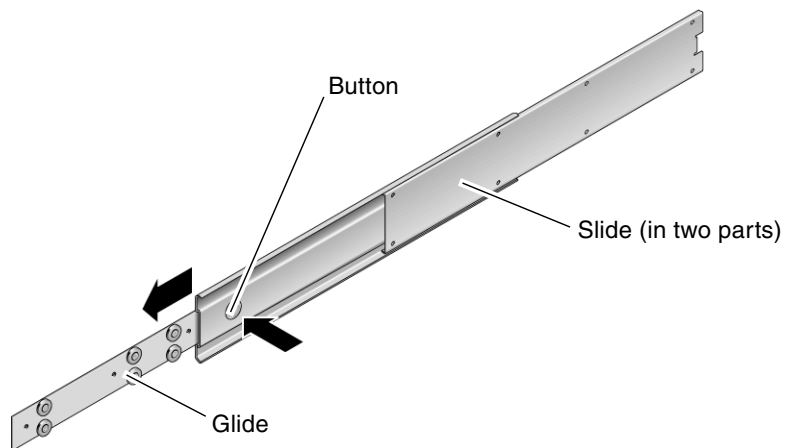


FIGURE 3-8 Dismantling the Slide

5. Using eight of the $M4 \times 0.5 \times 5$ mm panhead Phillips screws from the rackmount kit (four for each side), screw each glide to the side of the server chassis ([FIGURE 3-9](#)).

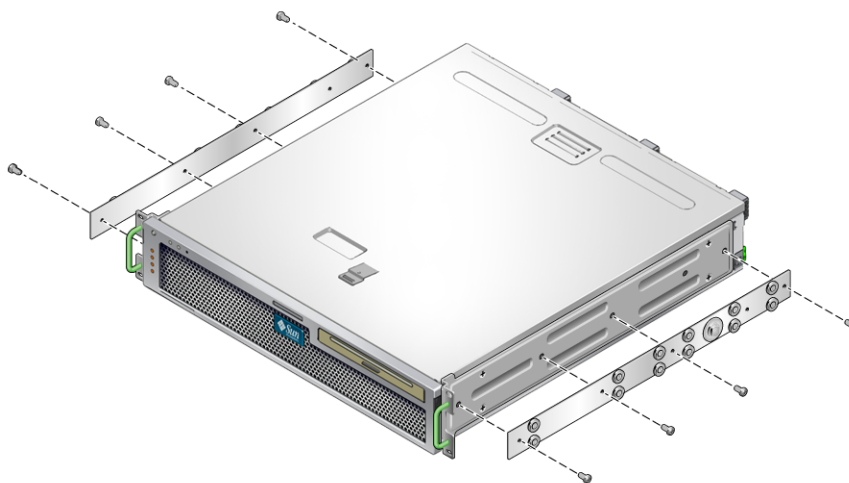


FIGURE 3-9 Fixing the Glides to the Server Chassis

6. Get the short brackets and long brackets from the rackmount kit ([FIGURE 3-6](#)).

7. Lift each short bracket to the desired position at the *front* of the rack and attach a short bracket to each of the front rack uprights (FIGURE 3-10).

Use two of the brass M6 collar screws and M6 cage nuts (if required), and one threaded strip, to secure each bracket (FIGURE 3-10).

8. Lift each long bracket to the desired position at the *rear* of the rack and attach a long bracket to each of the rear rack uprights (FIGURE 3-10).

To secure each bracket, use two of the brass M6 collar screws and M6 cage nuts (if required) and one threaded strip, exactly as you did for the front rack uprights in the previous step.

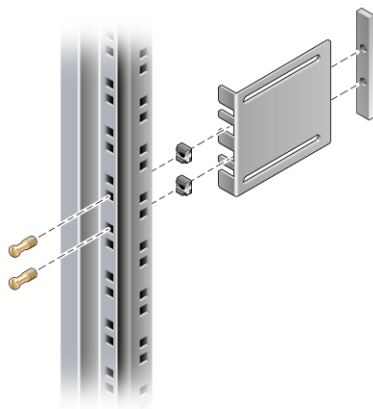


FIGURE 3-10 Securing the Brackets to the Rack

Note – If your rack has 10–32 holes, use the 10–32 collar screws and 10–32 threaded strips.

9. Extend a slide to line up the access holes with the front screw holes.
10. Secure the slide onto the short and long brackets at the front and rear of the rack (FIGURE 3-11).

Use the M5 panhead screws from the inside, and the M5 nuts, plain washers, and star washers from the outside. Use extension brackets instead of the long brackets if the dimension is greater than 665 mm.

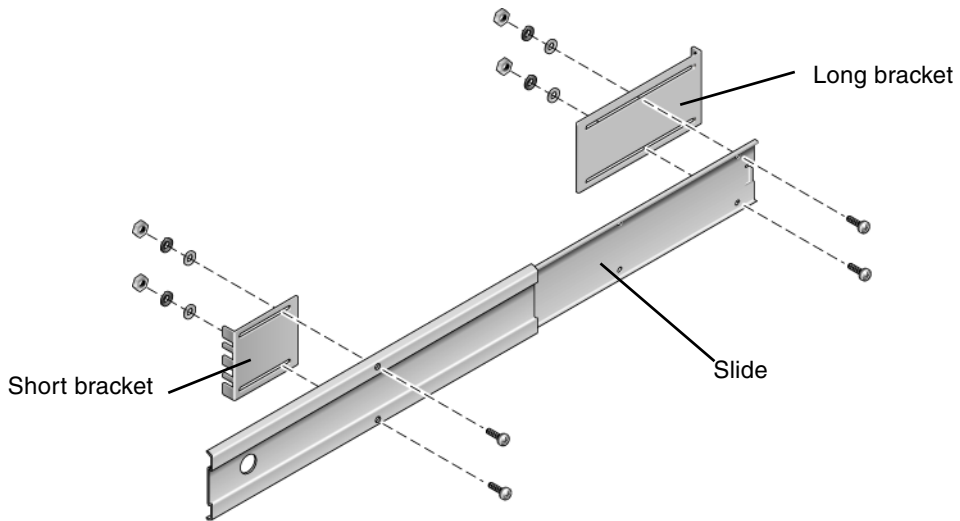


FIGURE 3-11 Securing the Slide to the Brackets

11. Repeat [Step 9](#) and [Step 10](#) for the slide on the other side of the rack.
12. Push the slides completely into the assembly on each side of the rack and release the stop catches.
13. Align the glides attached to the server with the slide assemblies in the rack.
You might find that there is too much or too little room between the two slides mounted in the rack, consequently the glides attached to the server might not align correctly with the slides in the rack. If either situation occurs, loosen the M6 collar screws and cage nuts on the long and short brackets ([Step 7](#) and [Step 8](#)), move them inward or outward to the appropriate points, then tighten them again.
14. Push in the slide buttons and slide the server all the way into the rack enclosure ([FIGURE 3-12](#)).

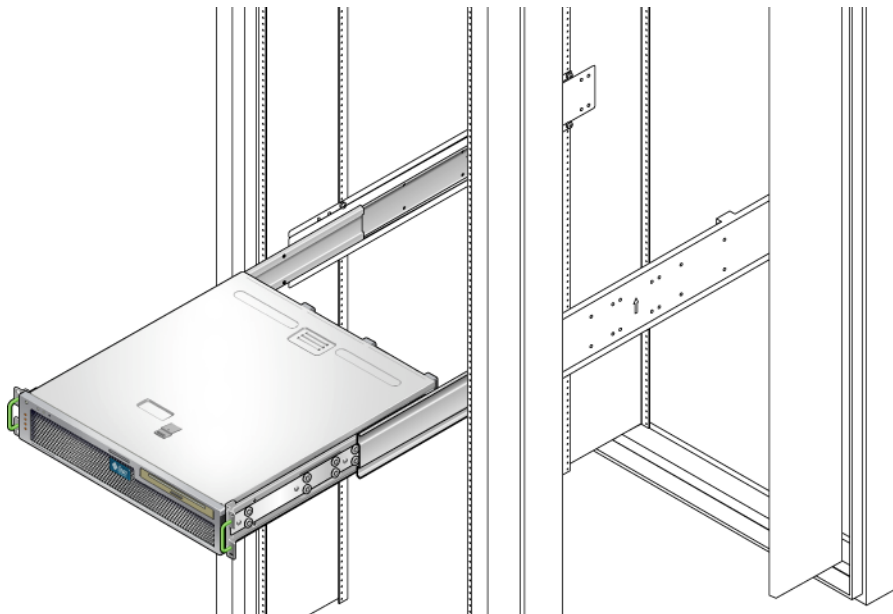


FIGURE 3-12 Sliding the Server Into the Rack

15. Using two screws per side, secure the front of the hardmount brackets that are attached to the sides of the server to the front of the rack ([FIGURE 3-13](#)).

The size of the screws varies, depending on your particular rack.

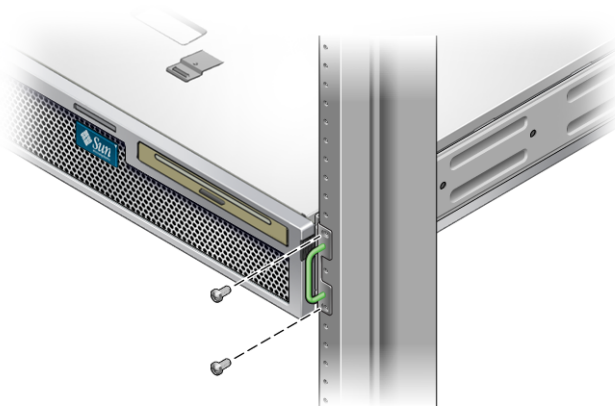


FIGURE 3-13 Securing the Front of the Server to the Rack

Hardmounting the Server in a 600-mm 4-Post Rack

▼ To Install a Server With a Hardmount in a 600-mm 4-Post Rack

The hardmount kit for a 600 mm 4-post rack consists of:

- Two adjustable rails
- Two side rails
- Two rear flanges
- Bag of screws

Note – The front-to-back rail spacing must be at least 392 mm (15.43 in.) and not more than 504 mm (19.84 in.) from the outside face of the front rail to the outside face of the back rail.

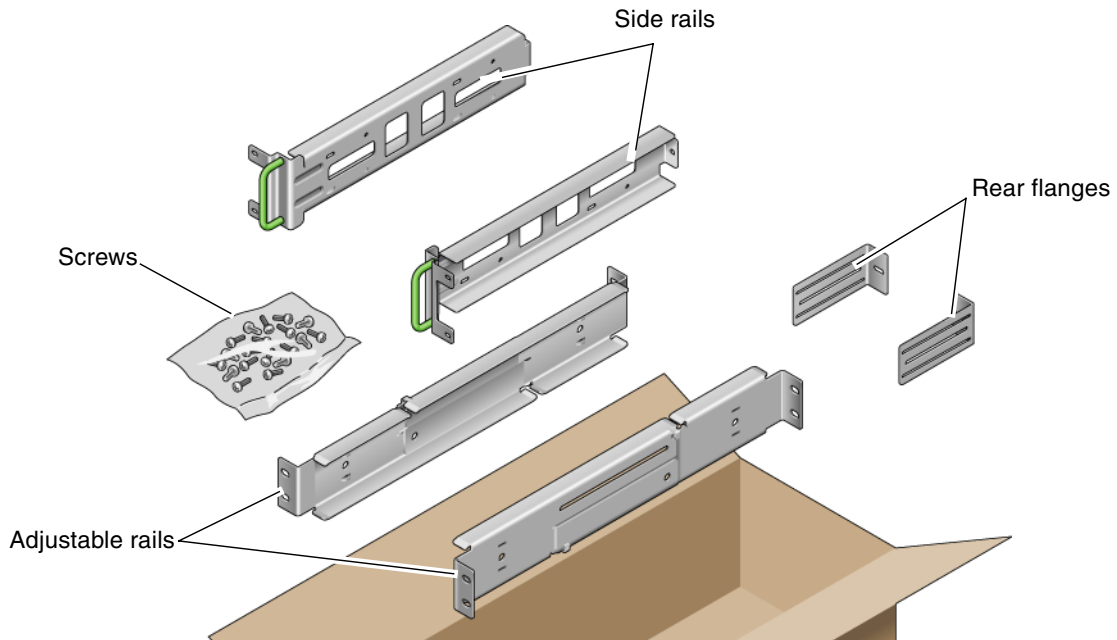


FIGURE 3-14 Contents of the Hardmount 600-mm 4-Post Kit

TABLE 3-4 Hardmount 600 mm 4-Post Rackmount Screw Kit Contents

Number	Description	Where Used
12	M5 x 10 SEM screws	8 for side rails, 4 for rear flanges
10	M5 x 12.7 mm screws	10 for rack, if appropriate
10	M6 x 13 mm screws	10 for rack, if appropriate
9	M6 square clip nuts	9 for rack, if appropriate
12	10-32 x 0.5 in. combo head screws	12 for rack, if appropriate
12	12-24 x 0.5 in. combo head screws	12 for rack, if appropriate

1. Get the adjustable rails from the rack kit ([FIGURE 3-14](#)).
2. Loosen the two screws at the middle of each adjustable rail so that you can extend the adjustable rail ([FIGURE 3-15](#)).

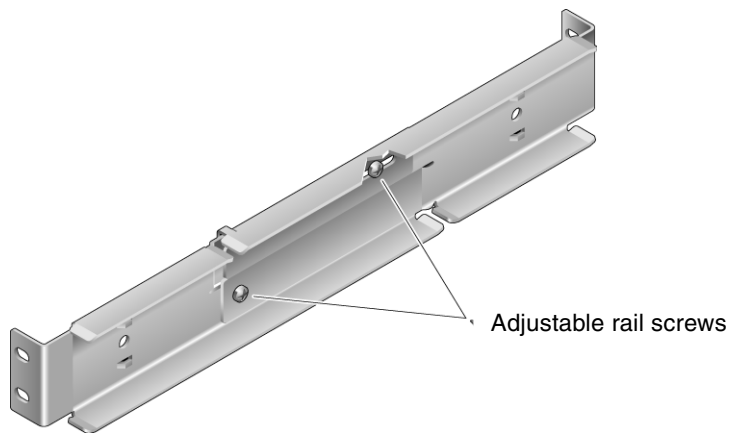


FIGURE 3-15 Adjustable Rail Screws

3. Lift one of the adjustable rails to the desired location in the rack. Using two screws, secure the front of the rail in the rack ([FIGURE 3-16](#)).

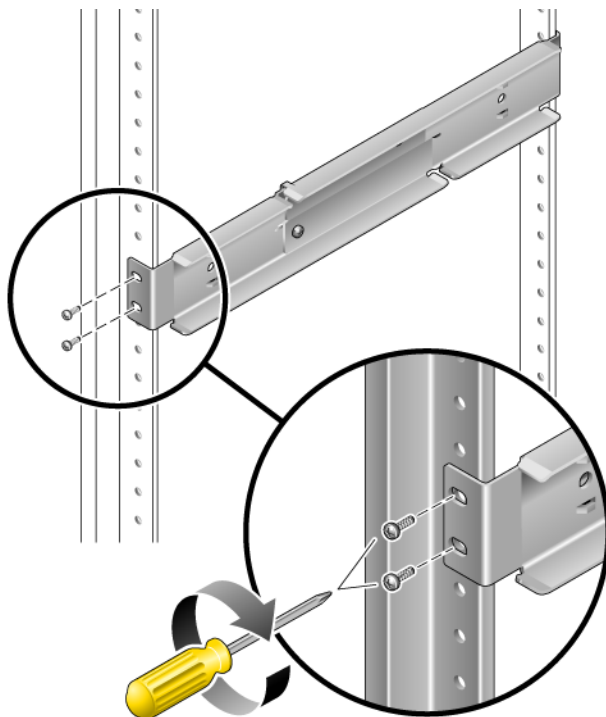


FIGURE 3-16 Securing the Front of the Adjustable Rails to the Rack

The size of the screws varies, depending on your particular rack.

4. **At the rear of the rack, use two screws to secure the rear of the adjustable rails to the rack (FIGURE 3-17).**

The size of the screws varies, depending on your particular rack.

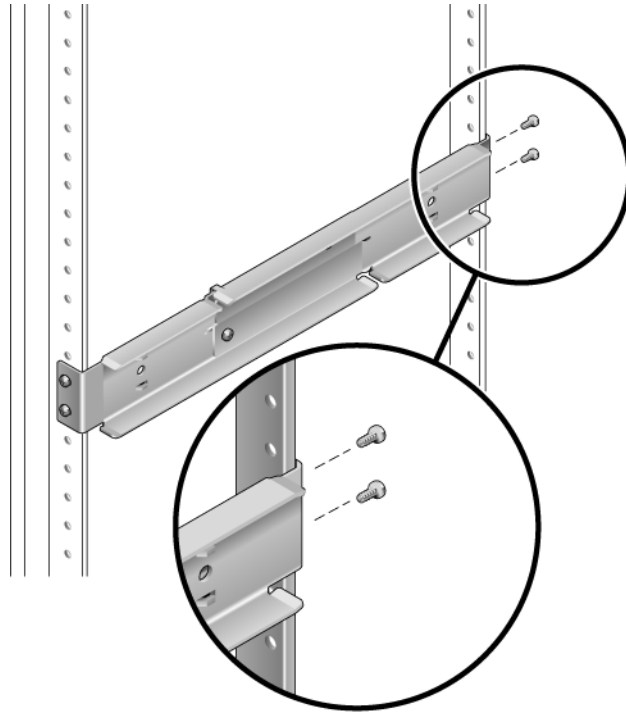


FIGURE 3-17 Securing the Rear of the Adjustable Rails to the Rack

5. Tighten the two screws at the middle of each adjustable rail ([FIGURE 3-15](#)).
6. Repeat [Step 3](#) through [Step 5](#) to mount the other adjustable rail into the rack.
7. Get the rear flanges from the rack kit ([FIGURE 3-14](#)).
8. Using one M5 × 10 SEM screw for each rear flange, loosely install the rear flange onto the rear of each of the adjustable rails ([FIGURE 3-18](#)).

Do not completely secure the rear flanges to the adjustable rails, you will use these flanges to set the rack depth for the server in a later step.

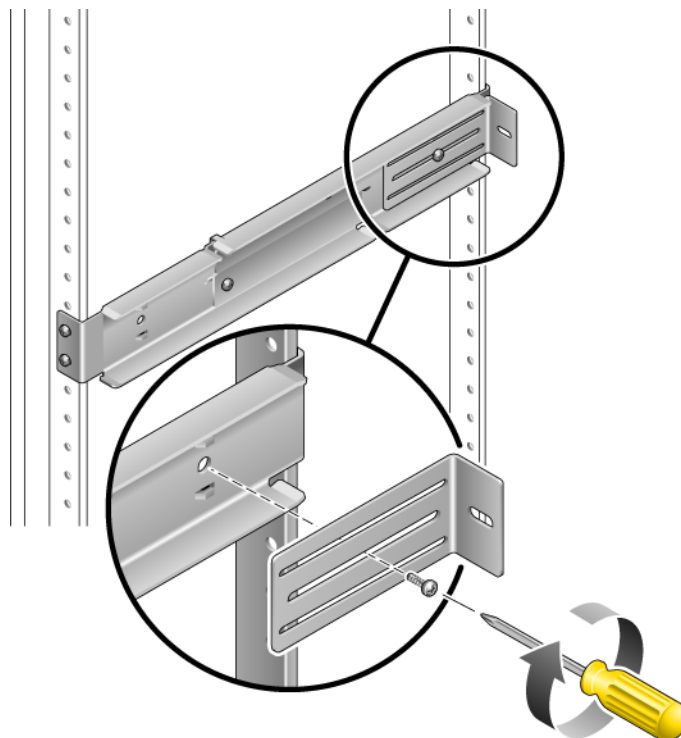


FIGURE 3-18 Installing the Rear Flange Onto the Adjustable Rail

9. Get the side rails from the rack kit ([FIGURE 3-14](#)).
10. Using eight of the M5 × 10 SEM screws (four for each side rail), secure the side rails to the sides of the server ([FIGURE 3-19](#)).

The side rails can accommodate rack rail setbacks (the distance from the front of the rack to the rack rail) of 50 mm, 75 mm, or 100 mm, depending on the type of rack you are installing the server into.

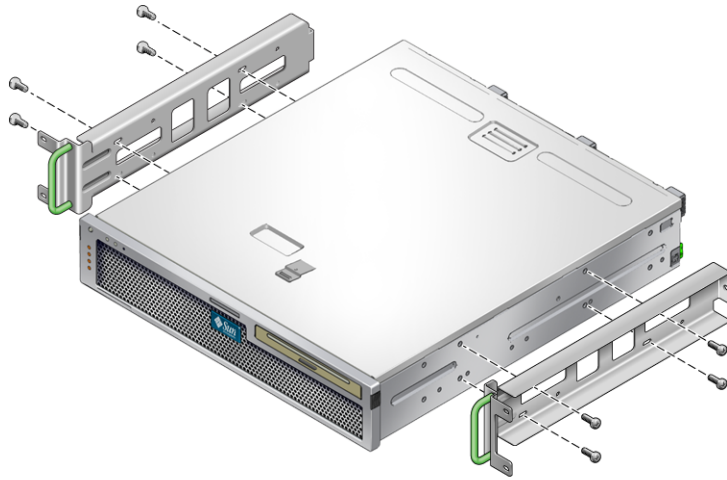


FIGURE 3-19 Securing the Side Rails to the Server

- 11. Lift the server into the rack and slide the server onto the adjustable rails (FIGURE 3-20).**

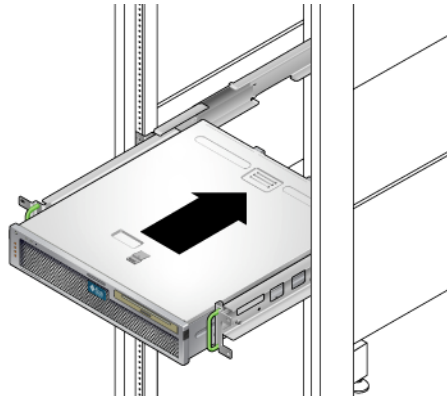


FIGURE 3-20 Sliding the Server Onto the Adjustable Rails

- 12. Push the server to the desired depth in the rack, then go to the rear of the server and push the rear flanges flush against the back of the server (FIGURE 3-18).**
If the rack is especially shallow, you can flip the rear flanges around so that they rest flush against the rear of the server.
- 13. Lift the server out of the rack.**

14. Set the rear flanges to the desired depth in the rack, then tighten the single $M5 \times 10$ SEM screw on each of the flanges to secure them to the adjustable rails ([FIGURE 3-18](#)).
15. Lift the server into the rack and slide it onto the adjustable rails.
16. Push the server backward until it rests flush against the rear flanges, then use one $M5 \times 10$ SEM screw for each rear flange to secure the rear of the server to the rear flanges ([FIGURE 3-21](#)).

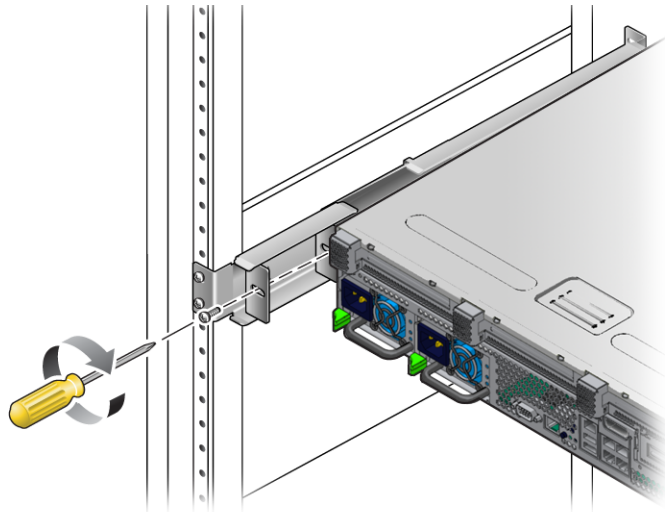


FIGURE 3-21 Securing the Rear of the Server to the Rear Flanges

17. At the front of the rack, use two screws per side to secure the side rails that are attached to the server to the front of the rack ([FIGURE 3-22](#)).
The size of the screws varies, depending on your particular rack.

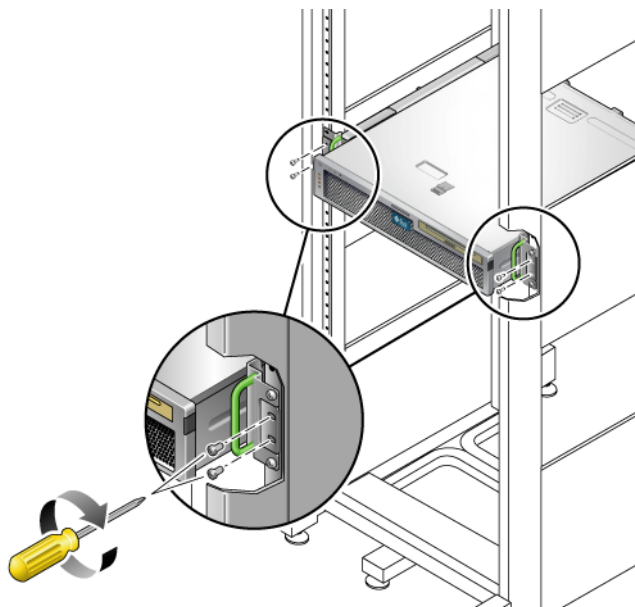


FIGURE 3-22 Securing the Front of the Server to the Front of the Rack

Installing a Server With a Hardmount in a 19-Inch 4-Post Rack for Use With the Cable Management Assembly

Note – Ensure that you have all of the parts in the rackmount kit before you begin the installation of the server. See [“Shipping Kit Inventory List” on page 13](#) and the Netra T2000 Server Getting Started Guide, 819-5844. This document is shipped with the server.

The rackmount kit contains two slide rail assemblies. A slide rail assembly can be installed on either the right or left side of the rack.

A slide rail assembly consists of two parts: a slide rail and a removable mounting bracket. The slide rail attaches to the rack posts. The mounting bracket attaches to the chassis.

▼ To Install the Slide Rail Assemblies

1. Pull both mounting brackets completely out of their respective slide rails:
 - a. Simultaneously press and hold the upper and lower lock buttons of the slide rail lock ([FIGURE 3-23](#)).

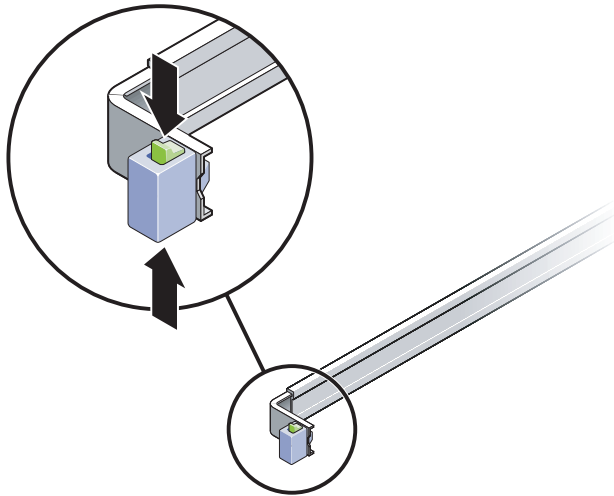


FIGURE 3-23 Unlocking the Slide Rail Assembly

- b. Pull the mounting bracket out until it locks in the extended position.
 - c. Slide the mounting bracket release button in the direction shown in [FIGURE 3-24](#), then slide the mounting bracket out of the slide rail.

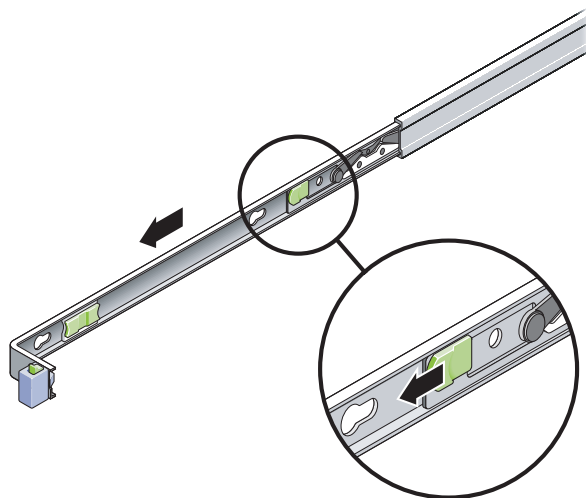


FIGURE 3-24 Location of the Mounting Bracket Release Button

- d. Press the metal lever (labeled Push) on the middle section ([FIGURE 3-25](#)) of the sliding rail, then push the middle section back into the rack.

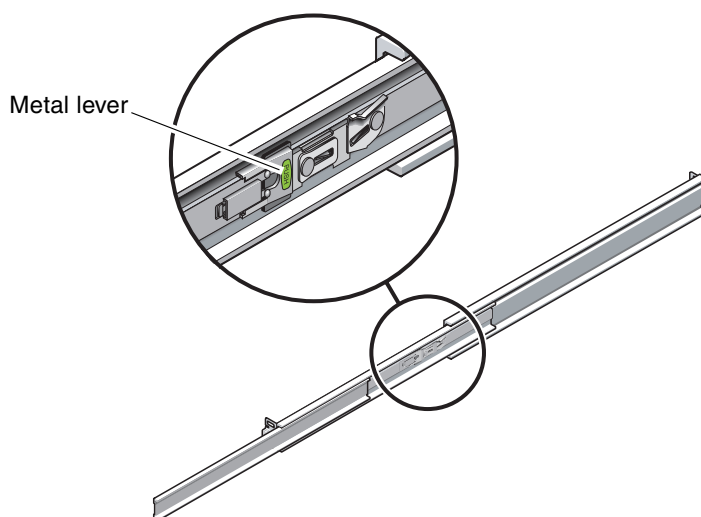


FIGURE 3-25 Unlocking the Slide Rail Middle Section

2. Attach a mounting bracket to the right side of the chassis.

- a. Position the mounting bracket against the server chassis (FIGURE 3-26) so that the slide rail lock is at the front and the three keyed openings on the mounting bracket are aligned with the three locating pins on the side of the chassis.

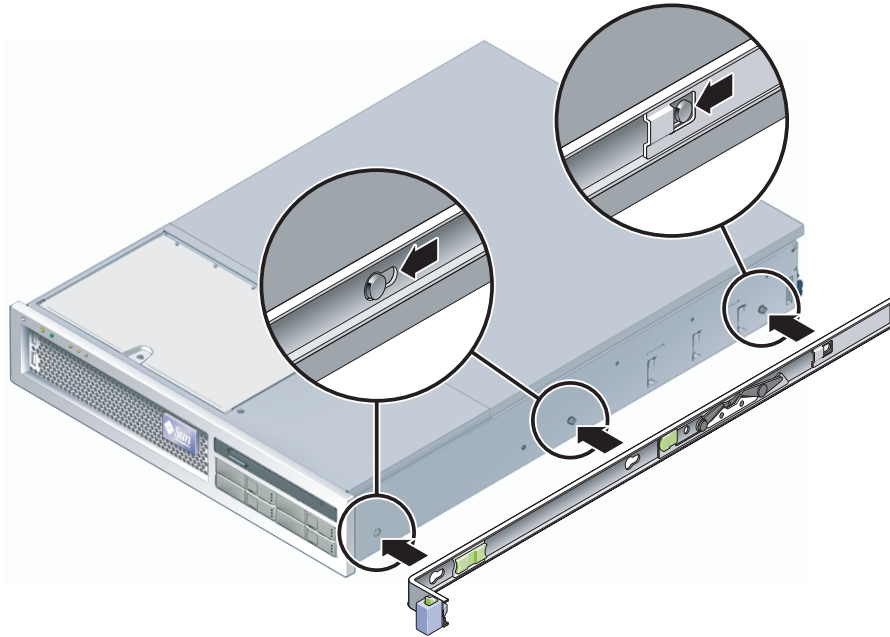


FIGURE 3-26 Attaching a Mounting Bracket to the Chassis

- b. With the heads of the three locating pins protruding through the three keyed openings in the mounting bracket, pull the mounting bracket toward the front of the chassis until the bracket locks into place with an audible *click*.
 - c. Verify that all three locating pins are trapped in the keyed openings and that the rear locating pin has engaged the mounting bracket lock, as shown in the right side of FIGURE 3-26.
3. Attach the second mounting bracket to the left side of the chassis.
 4. Determine which rack hole numbers to use when attaching the slide rails to the rack posts.

The server is two rack units tall (2 RU). The slide rails occupy the lower half of the 2 RU space.
 5. Determine which screws you will use to mount the slide rails.

- If your rack has threaded mounting holes in the rack posts, determine whether the threads are metric or standard. Select the appropriate screws from the package included in the mounting kit.
- If your rack does not have threaded mounting holes, the mounting screws are secured with a caged nut.

6. Attach a slide rail to the right front rack post.

- a. Loosely attach the front of a slide rail to the right front rack post ([FIGURE 3-27](#)) using two screws.

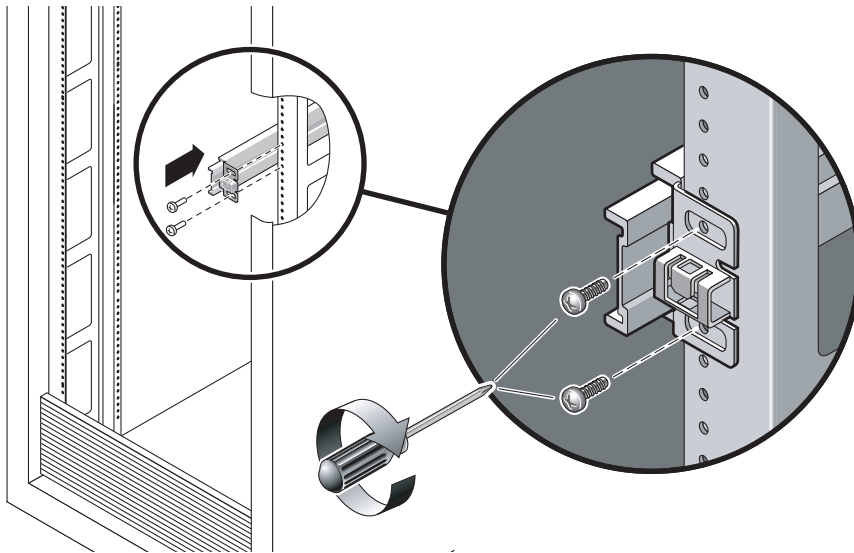


FIGURE 3-27 Mounting a Slide Rail

Note – Do not tighten the screws yet.

- b. Adjust the length of the slide rail by sliding the rear mounting flange to reach the outside edge of the rear rack post.
 - c. Loosely attach the rear of the slide rail to the rear rack post with two screws.
- 7. Attach the second slide rail to the left rack posts in a similar manner.**
Do not tighten the screws.
- 8. Use the slide rail spacing tool to adjust the distance between the slide rails:**
- a. At the front of the rack, plug the left side of the tool into slots at the end of the left rail ([FIGURE 3-28](#)).

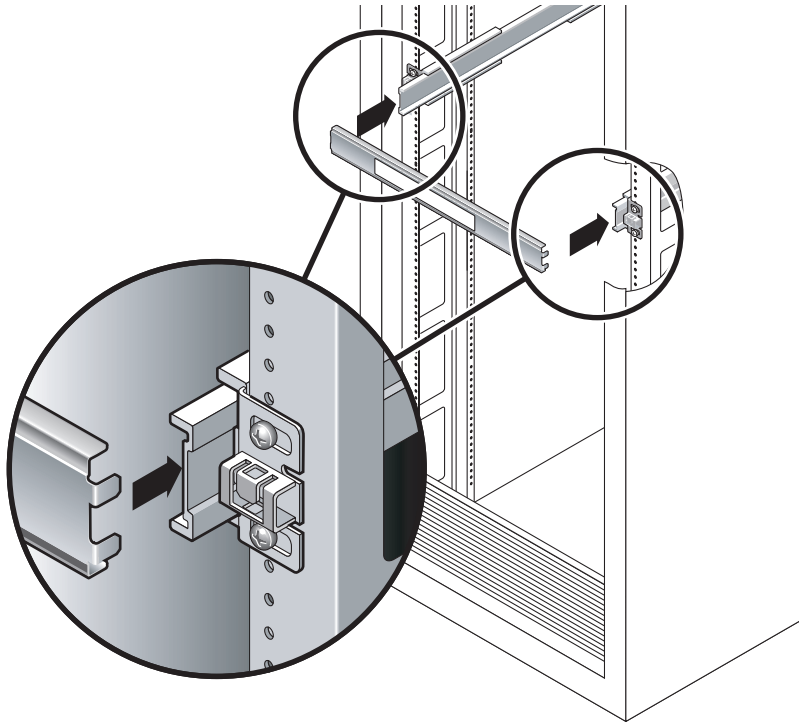


FIGURE 3-28 Adjusting the Distance Between the Slide Rails

- b. Insert the right side of the tool into the front end of the right rail, while sliding the end of the rail to the right or left as needed to enable the ends of the tool to enter the ends of both rails.

The distance between the rails is now equal to the width of the server with mounting brackets.

- c. Tighten the screws to lock the ends of the rails in place.
- d. At the rear of the rack, repeat [Step a](#) through [Step c](#) for the rear ends of the rails.

9. Deploy the antitilt bar, if the chassis or rack is so equipped.



Caution – The weight of the server on extended slide rails can be enough to overturn a cabinet.



Caution – The server weighs approximately 40 lb (18 kg). Two people are required to lift and mount the server into a rack enclosure when using the procedures in this chapter.

10. Insert the ends of the mounting brackets into the sliding rails (FIGURE 3-29).

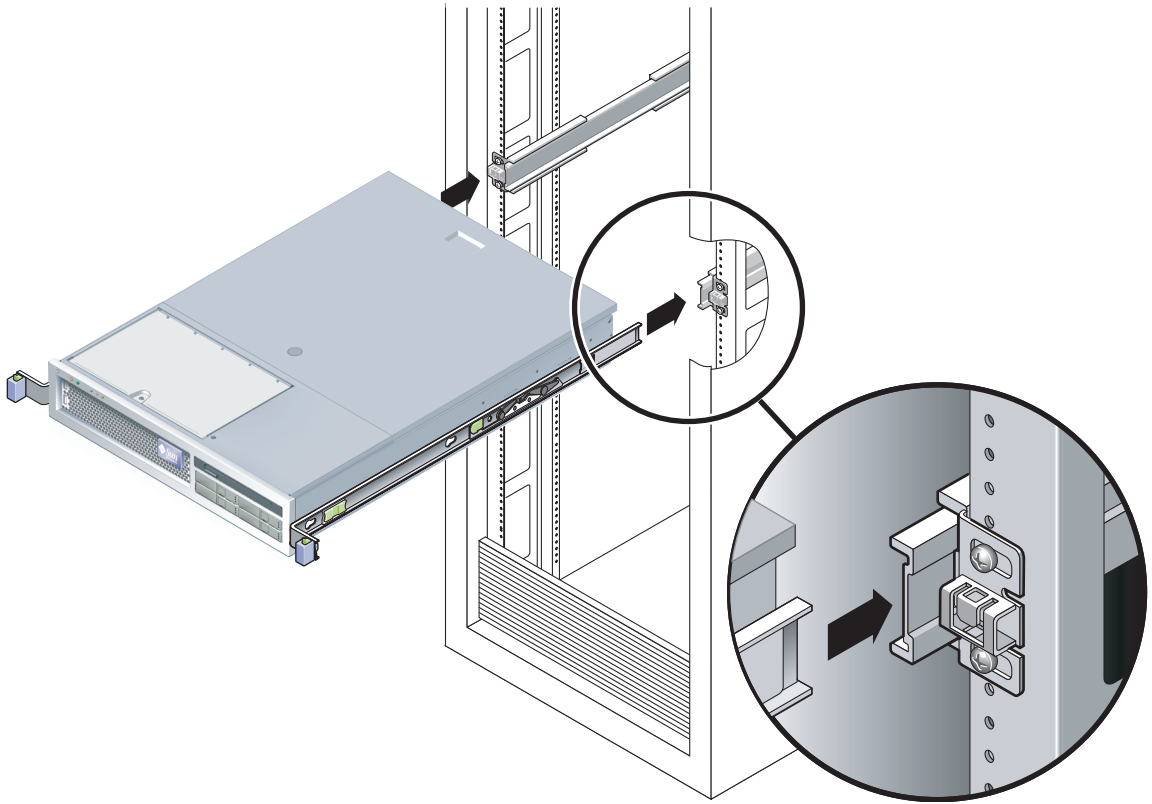


FIGURE 3-29 Mounting the Chassis on the Slide Rails

11. Slide the chassis into the rack.



Caution – Verify that the server is securely mounted in the rack, and that the slide rails are locked to the mounting brackets, before continuing.

▼ To Install the Cable Management Assembly

The cable management assembly (CMA) clips into the ends of the left and right sliding rail assemblies. No screws are necessary for mounting the CMA.

The right sides of the two CMA arms have hinged extensions. On the manufacturer's instruction sheet, the smaller extension is called the inner CMA connector. It attaches to the right mounting bracket. The larger extension is called the CMA outer connector, and attaches to the right sliding rail.



Caution – Support the CMA during this installation. Do not permit the assembly to hang by its own weight until it is secured by all three attachment points.

1. At the rear of the rack, plug the CMA rail extension into the end of the left sliding rail assembly (FIGURE 3-30).

The tab at the front of the rail extension will click into place.

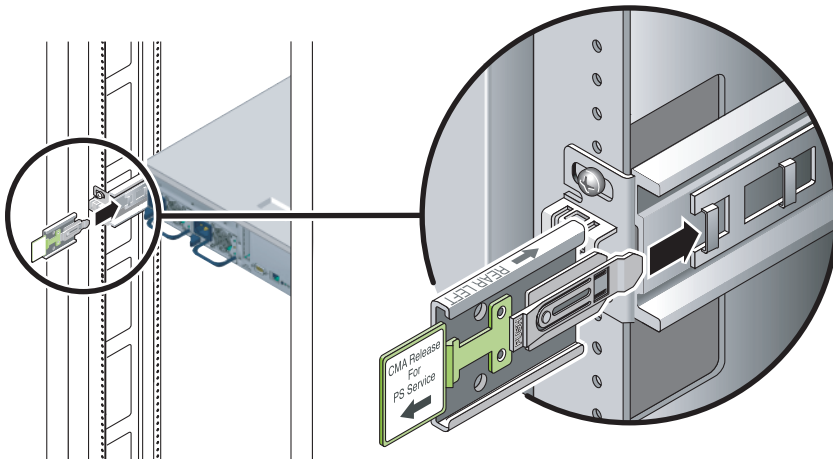


FIGURE 3-30 Inserting the CMA Rail Extension Into the Rear of the Left Slide Rail

2. Insert the smaller CMA extension into the clip located at the end of the mounting bracket (FIGURE 3-31).

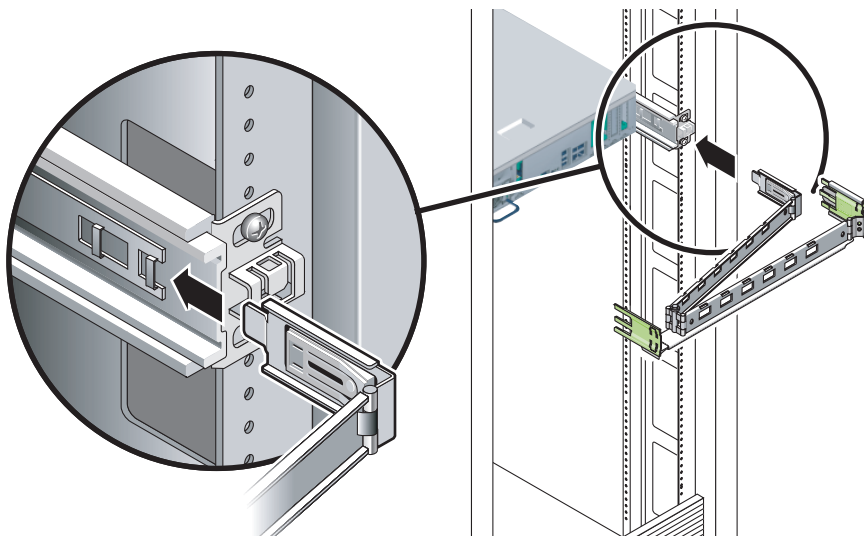


FIGURE 3-31 Mounting the Inner CMA Connector

3. Insert the larger extension into the end of the right rail ([FIGURE 3-32](#)).

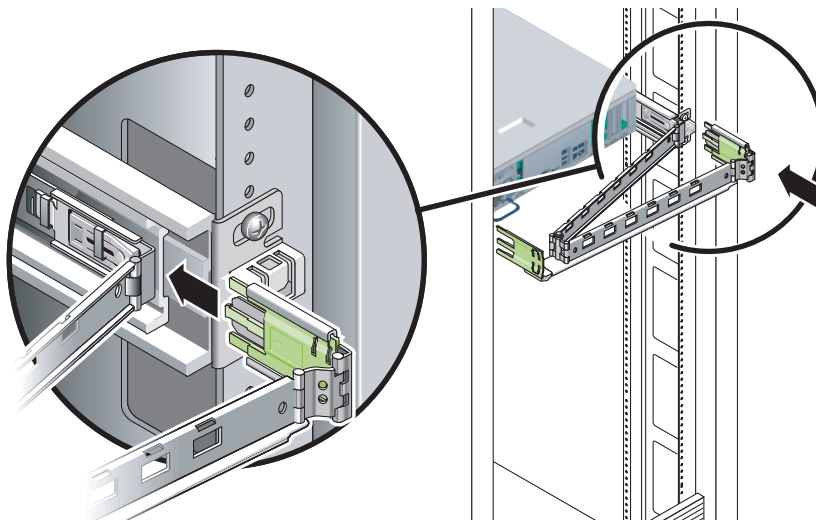


FIGURE 3-32 Attaching the Outer CMA Connector

4. Insert the hinged plastic connector at the left side of the CMA fully into the CMA rail extension (FIGURE 3-33).

The plastic tab on the CMA rail extension locks the hinged plastic connector in place.

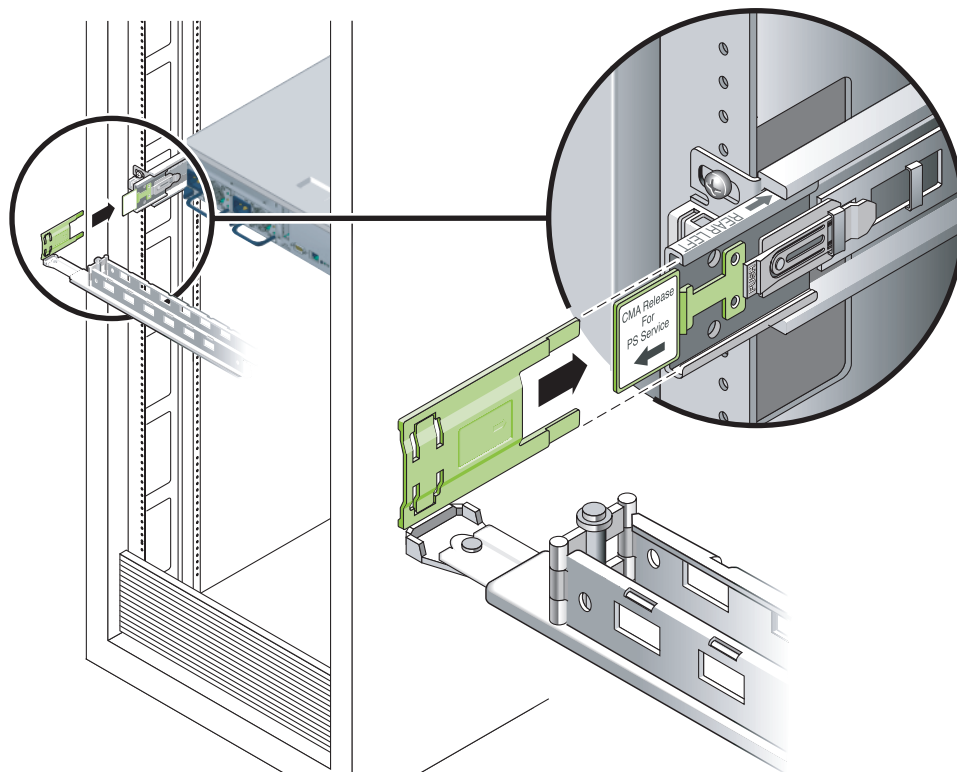


FIGURE 3-33 Mounting the Left Side of the Rail

▼ To Verify the Operation of the Slide Rails and the CMA

If you are using the CMA on a rack kit with slide rails, follow these steps to ensure that the CMA will not interfere with the ability to move the rack. You must first connect cables to the server.

Tip – Two people are needed for this procedure, one to move the server in and out of the rack, and one to observe the cables and CMA.

1. For a cabinet or a free-standing rack, deploy the antitilt bar.
2. Unlock the slide lock buttons (FIGURE 3-34) at the right and lefts sides of the server chassis, and slowly pull the server out of the rack until the slide rails reach their stops.

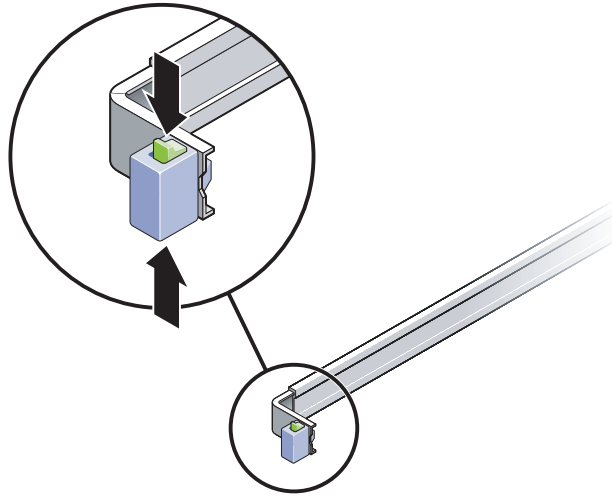


FIGURE 3-34 Unlocking the Slide Rail Assembly

3. Inspect the attached cables for any binding or kinks.
4. Verify that the CMA extends fully and does not bind in the slide rails.
5. When the server is fully extended out, release the slide rail lever stops (FIGURE 3-35).
6. Push both levers simultaneously and slide the server back into the rack.

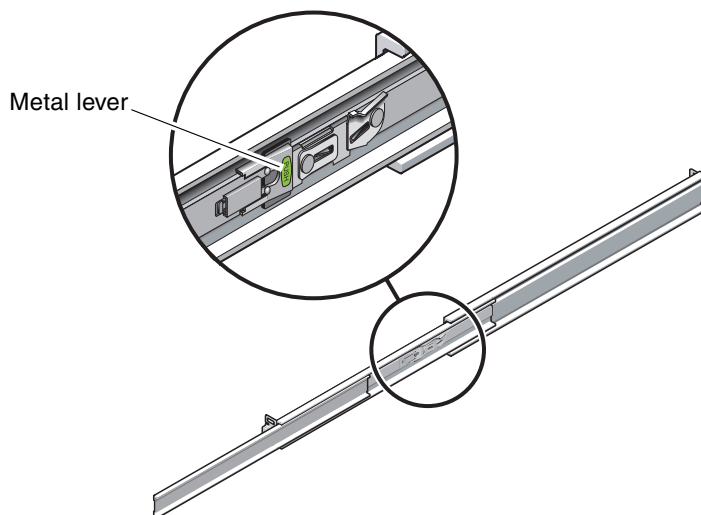


FIGURE 3-35 Unlocking the Slide Rail Lever Stops

7. **Simultaneously unlock both slide rail release buttons (FIGURE 3-36) and push the server completely into the rack.**

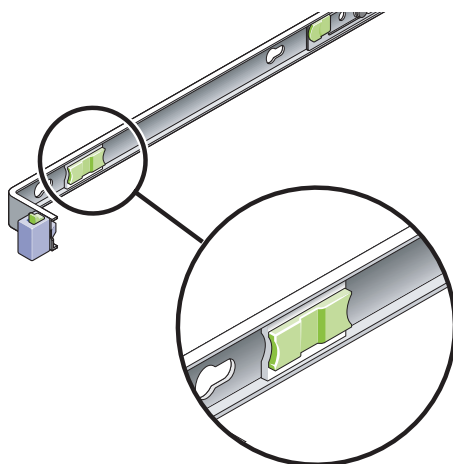


FIGURE 3-36 Slide Rail Release Button

The server should stop after approximately 15 in. (40 cm) of travel.

8. **Verify that the cables and the CMA retracted without binding.**

9. Adjust the cable hangers and CMA as required.

Mounting the Server Into a 2-Post Rack

This chapter provides instructions for installing the server in an open 2-post rack.

This chapter contains the following sections:

- [“2-Post Rackmounting Options” on page 56](#)
- [“Hardmounting the Server in a 23-Inch 2-Post Rack” on page 56](#)
- [“Hardmounting the Server in a 19-Inch 2-Post Rack” on page 61](#)

Note – References to *left* and *right* are from your viewpoint as you face either the front or rear of the equipment.



Caution – The server is heavy. Two people are required to lift and mount the server into a rack enclosure when following the procedures in this chapter.

2-Post Rackmounting Options

The server ships with a 19-inch, 4-post hardmount rack kit (see [“Hardmounting the Server in a 19-Inch 4-Post Rack” on page 22](#) for installation instructions). [TABLE 4-1](#) lists two additional 2-post rackmount kit options that can be ordered from Sun. This chapter provides installation instructions for these rackmount kit options.

TABLE 4-1 Optional Rackmount Kits

Mounting Kit	Installation Instructions
23-inch 2-post rackmount kit	“To Install a Server With a Hardmount in a 23-Inch 2-Post Rack” on page 56
19-inch 2-post rackmount kit	“To Install a Server With a Hardmount in a 19-Inch 2-Post Rack” on page 61

Note – If you have more than six DC-powered servers in the same rack, you might exceed Telcordia NEBS EMI limits.

Hardmounting the Server in a 23-Inch 2-Post Rack

▼ To Install a Server With a Hardmount in a 23-Inch 2-Post Rack

The hardmount kit for a 23-inch 2-post rack consists of:

- Two side brackets
- Two rail guides
- Two rear plates
- Bag of screws

Note – The 23-inch 2-post rackmount kit supports rack web thicknesses (the width of the rack post) of 76.20 mm (3 in.), 101.6 mm (4 in.), and 127 mm (5 in.).

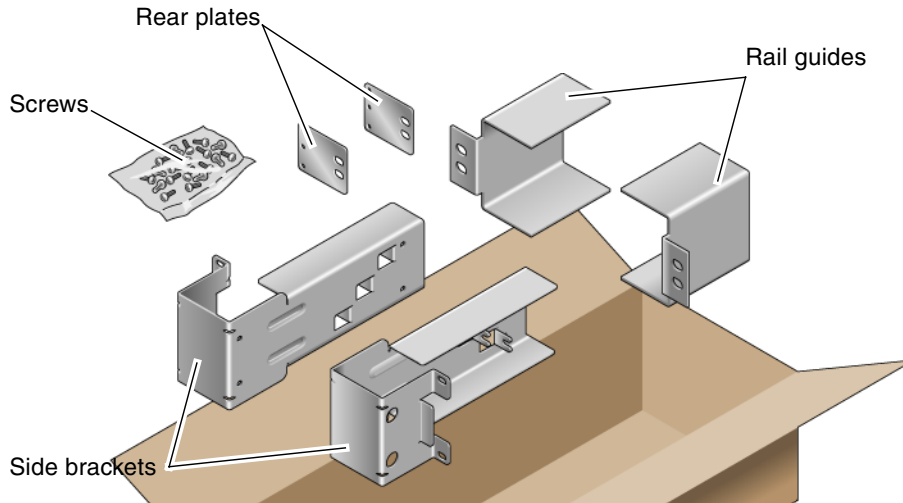


FIGURE 4-1 Contents of the Hardmount 23-Inch 2-Post Kit

TABLE 4-2 Hardmount 23-Inch 2-Post Rackmount Screw Kit Contents

Number	Description	Where Used
10	M5 x 10 SEM screws	8 for side brackets, 2 for rear plates
10	M5 x 12.7 mm screws	10 for rack, if appropriate
10	M6 x 13 mm screws	10 for rack, if appropriate
9	M6 square clip nuts	9 for rack, if appropriate
12	10-32 x 0.5 in. combo head screws	12 for rack, if appropriate
12	12-24 x 0.5 in. combo head screws	12 for rack, if appropriate

1. Get the side brackets from the rack kit (FIGURE 4-1).
2. Using eight of the M5 × 10 SEM screws (four for each side bracket), secure the side brackets to the sides of the server (FIGURE 4-2).

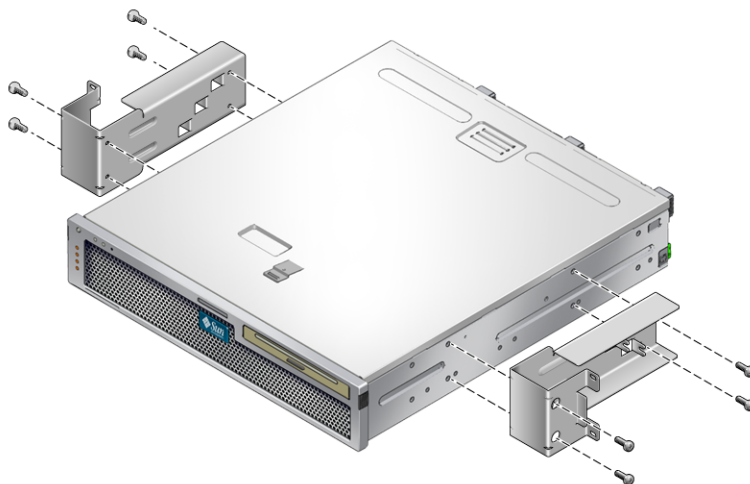


FIGURE 4-2 Securing the Side Brackets to the Side of the Server

3. Get the rail guides from the rack kit ([FIGURE 4-1](#)).
4. Lift the rail guides to the desired height in the rack and, using two screws each, secure both rail guides to the rack ([FIGURE 4-3](#)).

The size of the screws varies, depending on your particular rack.

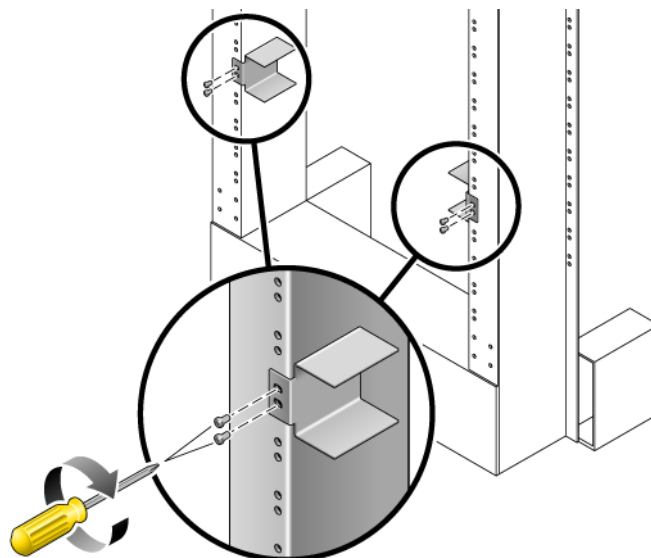


FIGURE 4-3 Installing the Rail Guides in the Rack

5. Lift the server into the rack and slide the server onto the rail guides ([FIGURE 4-4](#)).

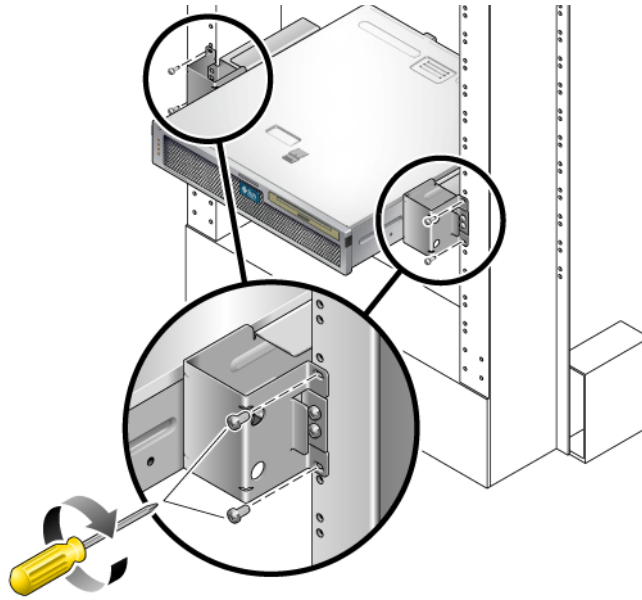


FIGURE 4-4 Installing and Securing the Server in the 2-Post Rack

6. Using two screws on each side, secure each side bracket on the server to the front of the rack ([FIGURE 4-4](#)).

The size of the screws varies, depending on your particular rack.

7. (Optional) If your environment contains especially high vibrations, use the rear plates to further secure the server to the rack ([FIGURE 4-1](#)).

The rear plates attach to the rear of the post and to one of the three eyelets on each side bracket, depending on the thickness of the post.

- a. Using one $M5 \times 10$ SEM screw for each rear plate, loosely install the screw in one of the three positions on the rear plate ([FIGURE 4-5](#)).

The position varies depending on the thickness of the rail in the rack. For example, [FIGURE 4-5](#) shows where you would install the screw for the middle rack position on the rear plate.

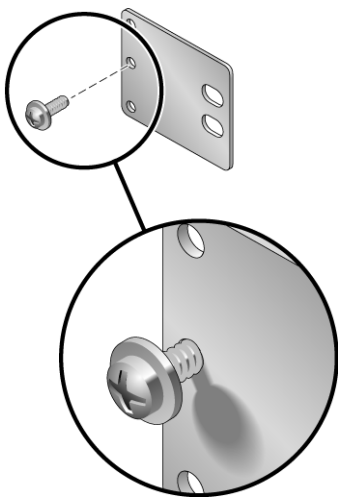


FIGURE 4-5 Installing a Screw on the Middle Rack Position on the Rear Plate

- b. Slide the rear plate in so that the screw slides into position into one of the eyelets.**

The screw head should be facing the rear of the server and the other side of the rear plate should be in front of the rack post ([FIGURE 4-6](#)).

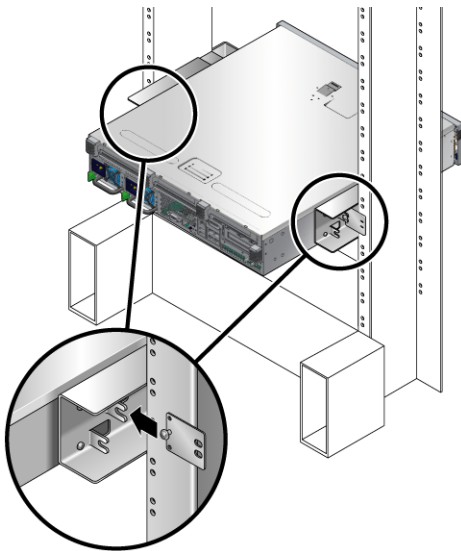


FIGURE 4-6 Installing the Rear Plate to the Side Bracket

- c. Tighten the screw to secure the rear plate to the eyelet on the side bracket (FIGURE 4-6).
- d. Using two screws, secure the other side of the rear plate to the back of the post (FIGURE 4-7).

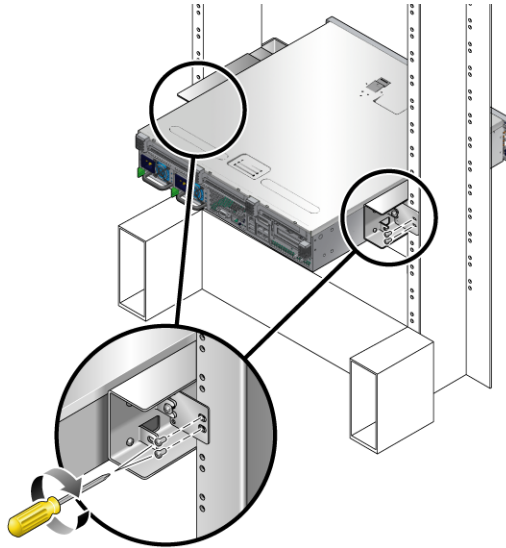


FIGURE 4-7 Securing the Rear Plate to the Back of the Post

The size of the screws varies, depending on your rack.

- e. Repeat [Step a](#) through [Step d](#) to secure the rear plate on the other post.

Hardmounting the Server in a 19-Inch 2-Post Rack

▼ To Install a Server With a Hardmount in a 19-Inch 2-Post Rack

The hardmount kit for a 19-inch 2-post rack consists of:

- Two side brackets

- Two rear plates
- Bag of screws

Note – The 19-inch 2-post rackmount kit supports rack web thicknesses (the width of the rack post) of 76.20 mm (3 in.), 101.6 mm (4 in.), and 127 mm (5 in.).

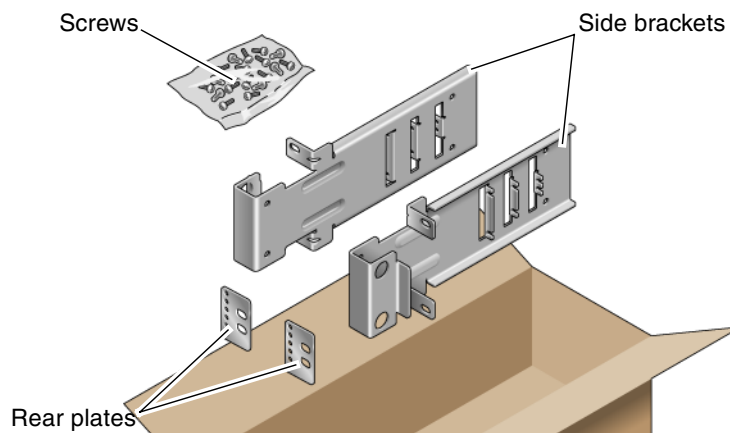


FIGURE 4-8 Contents of the Hardmount 19-Inch 2-Post Kit

TABLE 4-3 Hardmount 19-Inch 2-Post Rackmount Screw Kit Contents

Number	Description	Where Used
10	M5 x 10 SEM screws	8 for side brackets, 2 extra
6	M3 x 8 SEM screws	4 for rear plates, 2 extra
10	M5 x 12.7 mm screws	10 for rack, if appropriate
10	M6 x 13 mm screws	10 for rack, if appropriate
9	M6 square clip nuts	9 for rack, if appropriate
12	10-32 x 0.5 in. combo head screws	12 for rack, if appropriate
12	12-24 x 0.5 in. combo head screws	12 for rack, if appropriate

1. Get the side brackets from the rack kit (FIGURE 4-8).
2. Using four of the M5 x 10 SEM screws for each side bracket, secure the side brackets to the sides of the server (FIGURE 4-9).

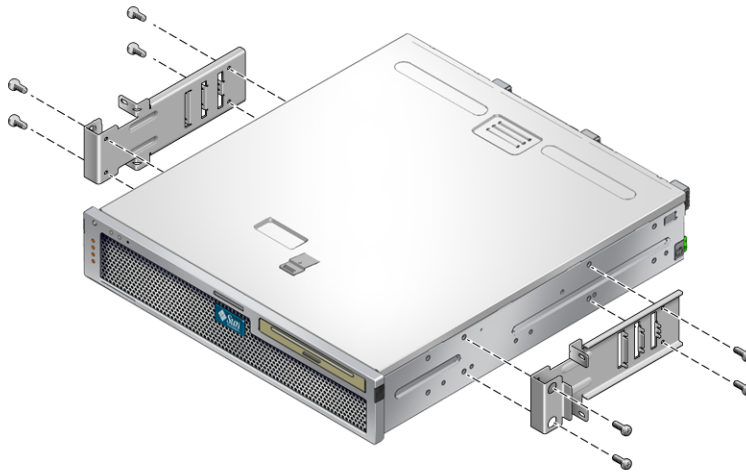


FIGURE 4-9 Securing the Side Brackets to the Side of the Server

3. Lift the server into the rack.
4. Using two screws for each bracket, secure the front of the server to the front of the rack ([FIGURE 4-10](#)).

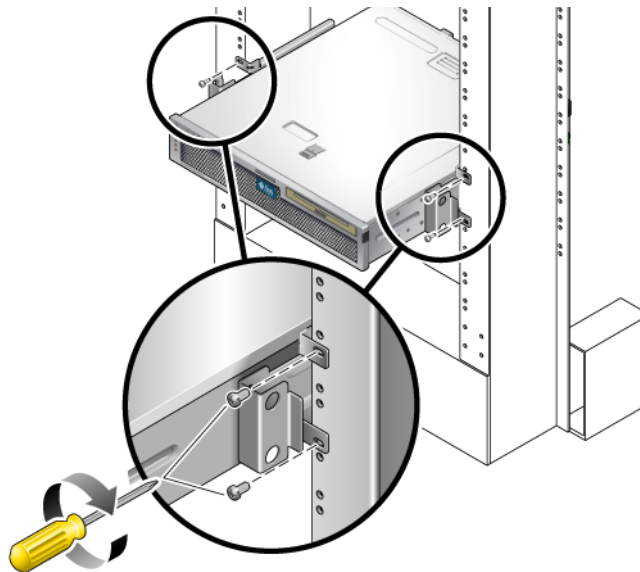


FIGURE 4-10 Installing and Securing the Server in the 2-Post Rack

The size of the screws varies, depending on your rack.

5. **(Optional)** If your environment contains especially high vibrations, use the rear plates to further secure the server to the rack (FIGURE 4-8).

The rear plates attach to the rear of the post and to one of the three sets of eyelets on each side bracket, depending on the thickness of the post.

- a. Using two of the M3 × 8 SEM screws for each rear plate, loosely install the screws in one of the six positions on the rear plate (FIGURE 4-11).

The position varies depending on the thickness of the rail in the rack. For example, FIGURE 4-11 shows where you would install the screws for the optimum rack position on the rear plate.

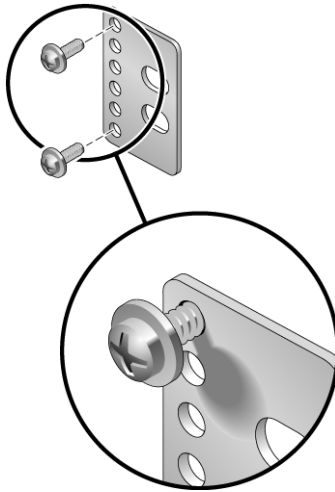


FIGURE 4-11 Installing Screws on the Optimum Rack Position on the Rear Plate

- b. Slide the rear plate in so that the screws slide into position into one set of the eyelets.

The screw heads should be facing the rear of the server and the other side of the rear plate should be in front of the rack post (FIGURE 4-12).

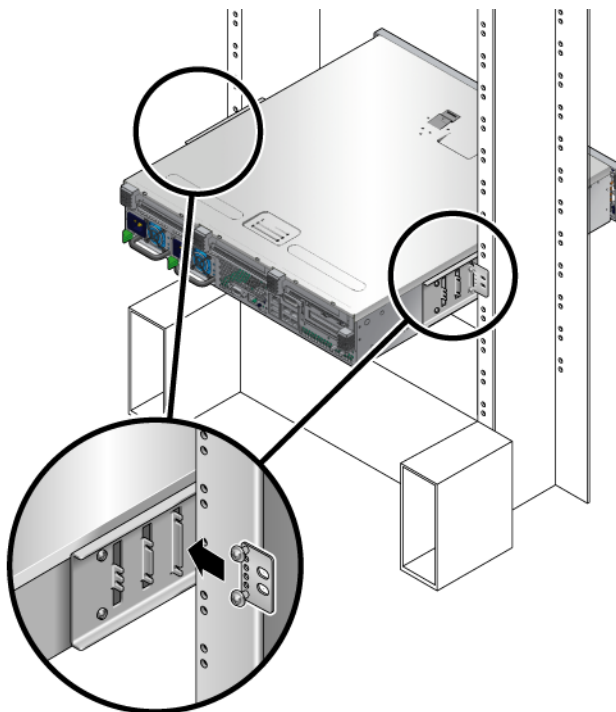


FIGURE 4-12 Installing the Rear Plate to the Side Bracket

- c. Tighten the screws to secure the rear plate to the set of eyelets on the side bracket ([FIGURE 4-12](#)).
- d. Using two screws, secure the other side of the rear plate to the back of the post ([FIGURE 4-13](#)).

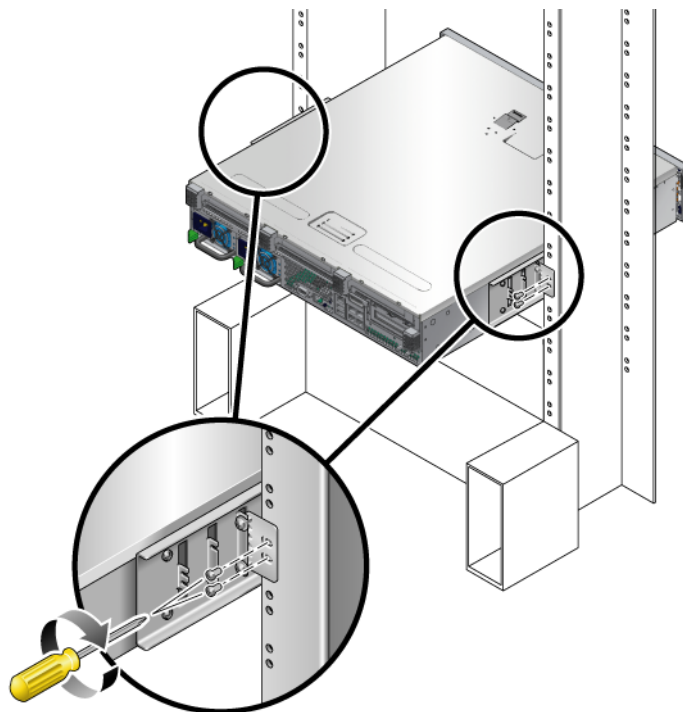


FIGURE 4-13 Securing the Rear Plate to the Rack

The size of the screws varies, depending on your rack.

- e. Repeat [Step a](#) through [Step d](#) to secure the rear plate on the other post.

Cabling the Server

This chapter provides instructions for cabling the server. Topics include:

- [“Data Ports and Cabling Notes” on page 67](#)
- [“Connecting Cables” on page 69](#)
- [“Managing Cables With the CMA” on page 75](#)

Note – References to *left* and *right* are from your viewpoint as you face either the front or rear of the equipment.

Data Ports and Cabling Notes

Port Locations

See [FIGURE 5-1](#) for the locations of the ports on the server.

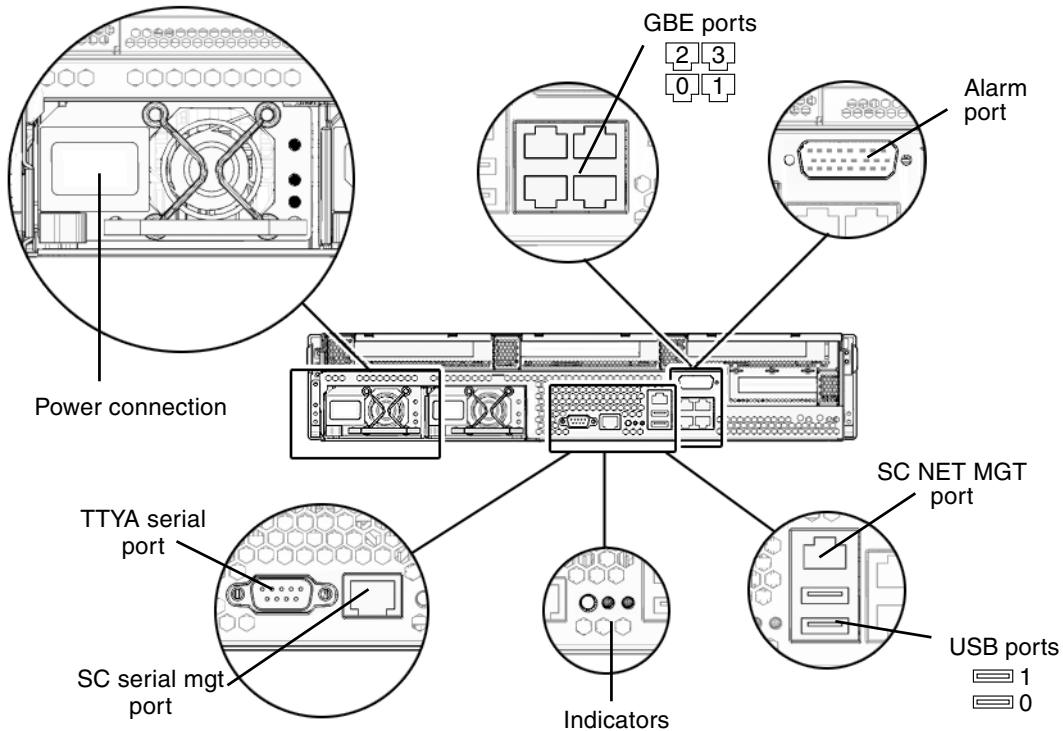


FIGURE 5-1 Rear Panel Features

Cabling Notes

The following list describes the server's cable connections and ports:

■ Minimum cable connections for the server:

- At least one server on-board Ethernet network connection (GBE ports)
- The system controller serial management port (SERIAL MGT port) or, the system controller network management port (NET MGT port)
- Power cables for the two power supplies

■ System controller (SC) management ports: There are two SC management ports for use with the ALOM system controller.

- The SC serial management port (labeled SERIAL MGT) uses an RJ-45 cable and is always available. This is the default connection to the ALOM system controller.

- The SC network management port (labeled NET MGT) is the optional connection to the ALOM system controller. This port is not available until you have configured network settings for the system controller (through the SC serial management port). See [“Enabling the System Controller Network Management Port” on page 80](#). The SC network management port uses an RJ-45 cable for a 10/100BASE-T connection. This port does not support connections to Gigabit networks.
- **Ethernet ports:** Labeled NET0, NET1, NET2, and NET3. The Ethernet interfaces operate at 10 Mbyte/sec, 100 Mbyte/sec, and 1000 Mbyte/sec.
- **TTYA serial port:** Use the DB-9 connector with a null modem cable for serial devices. This port appears as `ttya` in Solaris OS and OpenBoot messages. This port is not connected to the SC serial management port.
- **USB Ports:** USB ports support hot-plugging. You can connect and disconnect USB cables and peripheral devices while the server is running, without affecting system operations.
 - You can only perform USB hot-plug operations while the OS is running. USB hot-plug operations are not supported when the OpenBoot PROM `ok` prompt is displayed or before the system has completed booting.
 - You can connect up to 126 devices to each of the two USB controllers, for a total of 252 USB devices per server.
- **Input power cables:** Do not attach power cables to the power supplies until you have finished connecting the data cables, and have connected the server to a serial terminal or a terminal emulator (PC or workstation). The server goes into Standby mode and the ALOM system controller initializes as soon as the input power cables are connected to the power source. System messages might be lost if the server is not connected to a terminal, PC, or workstation at this time.

Connecting Cables

▼ To Connect the Ethernet Network Cables

The server has four RJ-45 Gigabit Ethernet network connectors. They are marked NET0, NET1, NET2, and NET3 ([FIGURE 5-2](#)).

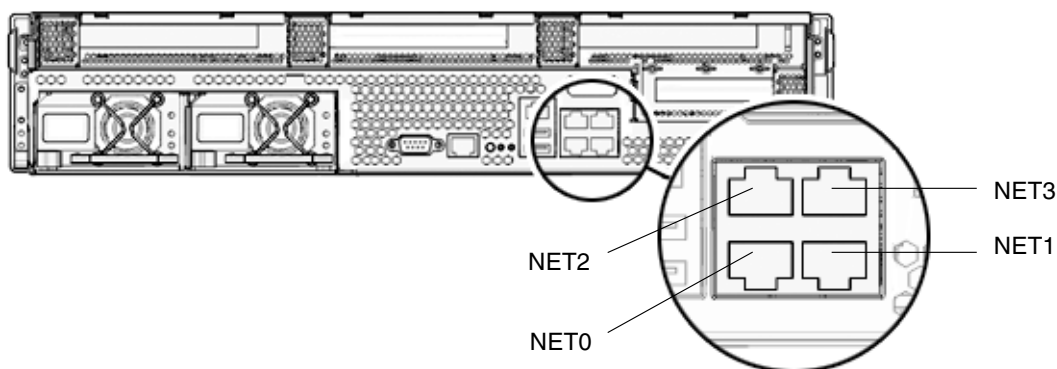


FIGURE 5-2 Ethernet Network Connections

1. **Connect a Category 5 cable from your network switch or hub to Ethernet Port 0 (NET0) on the rear of the chassis.**
2. **As needed, connect Category 5 cables from your network switch or hub to the remaining Ethernet ports (NET1, NET2, NET3).**

▼ To Connect the SC Serial Management Port

Use this port for server management. This port is needed to set up the SC network management port, as detailed in [“Enabling the System Controller Network Management Port” on page 80](#).

The SC serial management port is marked SER MGT. It is the leftmost RJ-45 port on the rear of the chassis ([FIGURE 5-3](#)).

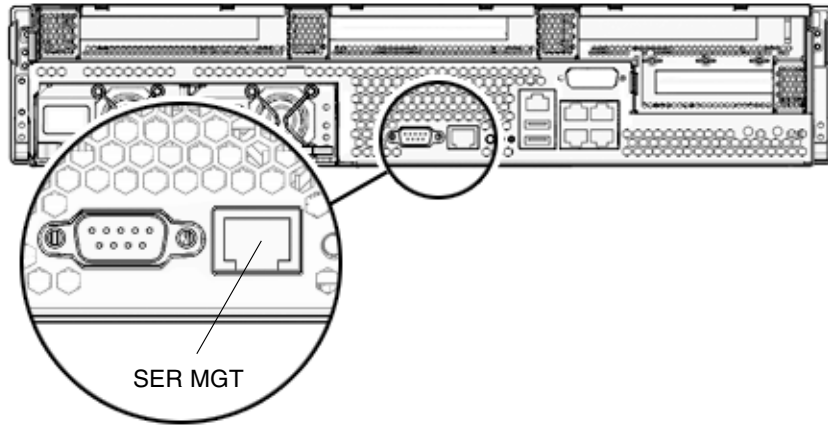


FIGURE 5-3 System Controller Serial Connection

- Connect a Category 5 cable from the SC serial management port to the terminal device.

▼ To Connect the SC Network Management Port

The SC network management port is marked NET MGT. It is the RJ-45 port above the rear USB ports.

Note – This port is not operational until you configure the network settings (through the serial management port), as detailed in [“To Configure the System Controller Network Management Port”](#) on page 81.

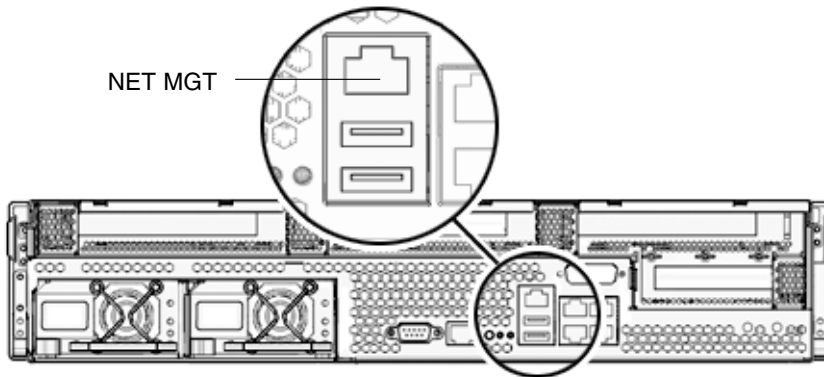


FIGURE 5-4 System Controller Network Connection

- **Connect a Category 5 cable from your network switch or hub to the Network Management Port.**

Input Power Cables

Note – Finish the hardware procedures in this chapter, but do not attach the input power cables yet.

Powering on the server for the first time requires special preparation and procedures. For example, if you have not prepared a display before connecting the input power cables, system messages might be lost. You are instructed to connect the server to input power in [“Powering On the Server for the First Time” on page 77](#).



Caution – The server goes into Standby mode and the system controller initializes as soon as the input power cables are connected to the power source.

TTYA Serial Port

The TTYA serial port connector uses a DB-9 connector (item 1 in [FIGURE 5-5](#)). Use this port for general-purpose serial data transfers. This port is not connected to the SC serial management port.

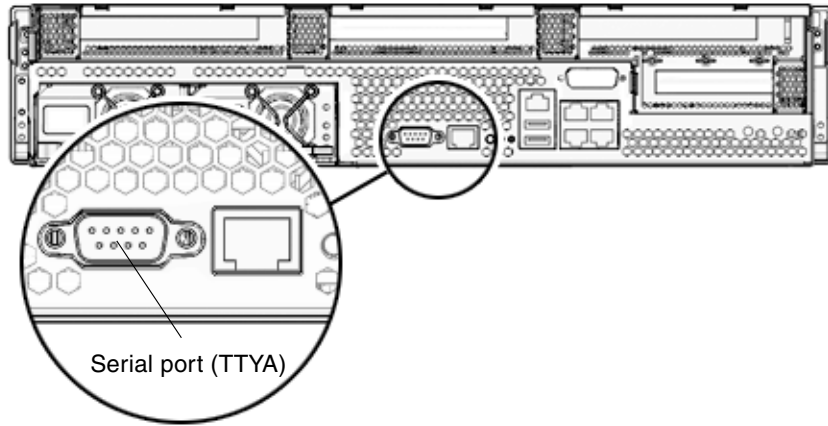


FIGURE 5-5 Serial Port

Use a null modem cable or an adapter to perform the crossovers given for each connector.

- If connecting to a serial port on a personal computer, use Sun adapter part number 530-3100-01.
- If connecting to a Sun workstation or server, use Sun adapter part number 530-2889-03.

USB Ports

Two Universal Serial Bus (USB) ports are provided on the server. USB ports 0 and 1 are located on the rear of the chassis ([FIGURE 5-6](#)).

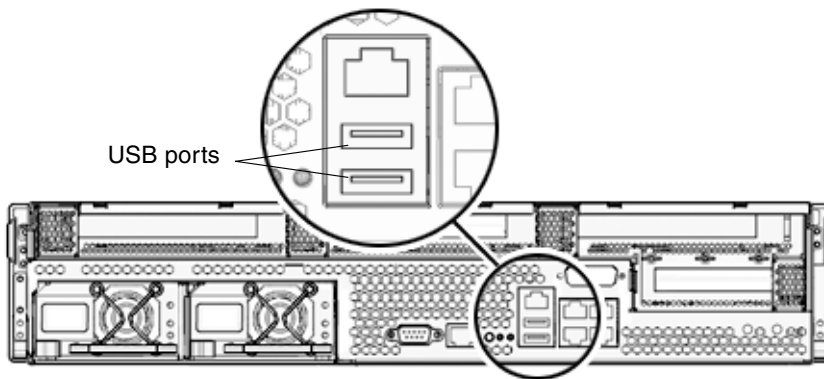


FIGURE 5-6 USB Ports

Alarm Port

The server has a dry-contact alarm port to support telco applications.

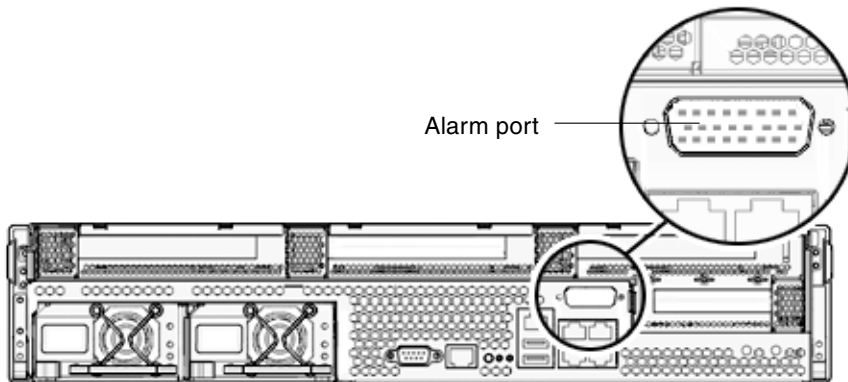


FIGURE 5-7 Alarm Port

Managing Cables With the CMA

▼ To Open and Close a Cable Clip

1. To open a cable clip, press the front of the cable clip and lift the hinged top.
2. Route cables through the clip, then press the top of the cable clip to lock.

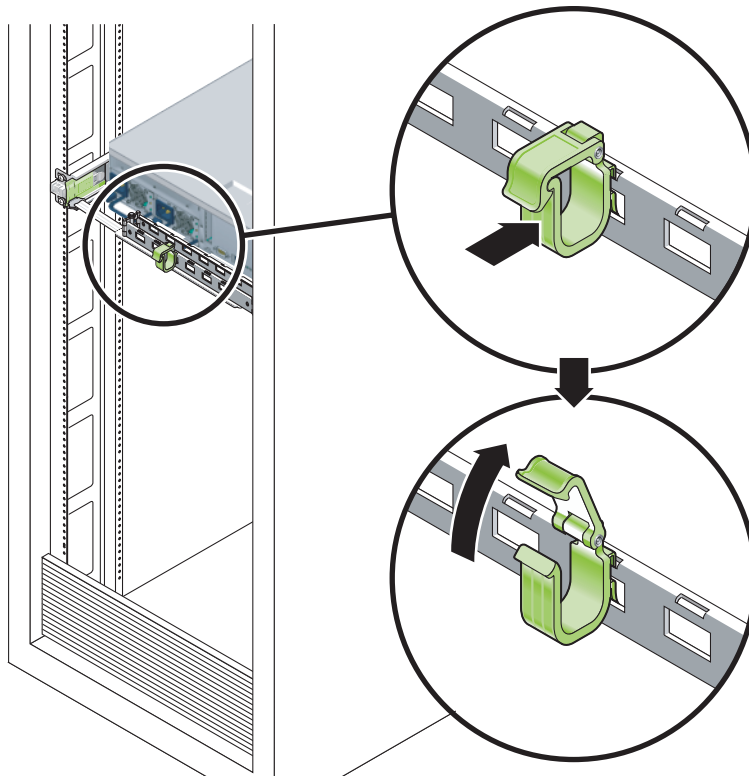


FIGURE 5-8 Opening a Cable Clip

▼ To Move a Cable Clip

1. To remove a cable clip from the CMA arm, lift the cable clip approximately 3/8 in. (10 mm) to free the lower clip lock, then rotate the entire clip about 90 degrees to free the upper clip lock.

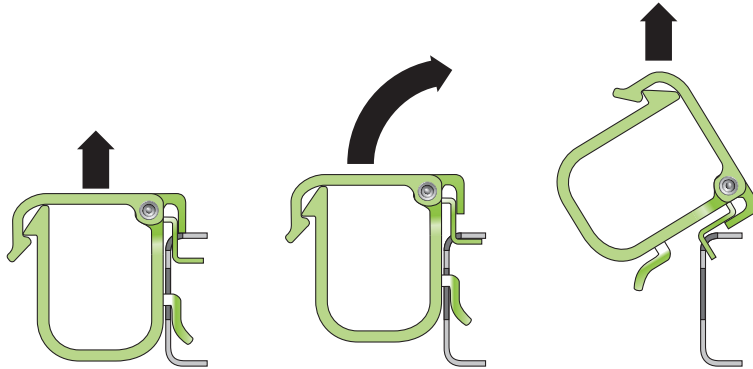


FIGURE 5-9 Removing a Cable Clip

2. To insert a cable clip, position the upper and lower clip locks in the slots of the CMA arm, then press the clip down approximately 3/8 in. (10 mm).

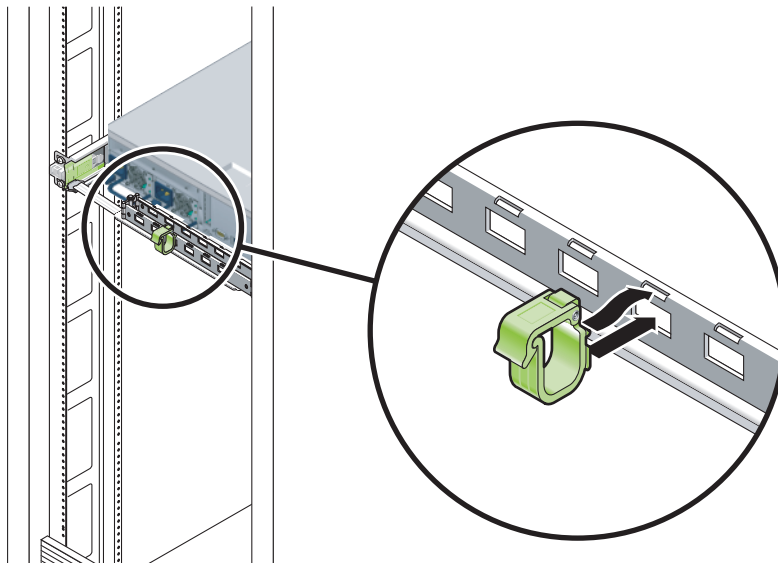


FIGURE 5-10 Mounting or Moving a Cable Clip

Powering On the Server

This chapter includes instructions for booting the server and for enabling the system controller network management port.

The following topics are discussed:

- [“Powering On the Server for the First Time” on page 77](#)
- [“Enabling the System Controller Network Management Port” on page 80](#)
- [“Logging Into the System Controller” on page 80](#)
- [“Using the System Controller for Common Operations” on page 86](#)
- [“Booting the Solaris Operating System” on page 89](#)

Powering On the Server for the First Time



Tip – The serial terminal or a terminal emulator should be connected before you connect the power cables, or you will not see the system messages. The server goes into Standby mode and the ALOM system controller initializes as soon as the input power cables are connected to the power source.

Note – If you are not logged in, ALOM times out after 60 seconds and reverts to the system console. For more information, refer to the *ALOM CMT 1.2 Guide*.

The system controller runs on the 3.3v standby voltage. As soon as power is connected to the server, the system controller powers on, runs diagnostics, and initializes the ALOM firmware.

▼ To Power On the Server for the First Time

1. If you have not already done so, connect a terminal or a terminal emulator (PC or workstation) to the SC serial management port.

Configure the terminal or terminal emulator with these settings:

- 9600 baud
- 8 bits
- No parity
- 1 Stop bit
- No handshaking

Note – When you power on the server for the first time and you do not have a terminal or terminal emulator (PC or workstation) connected to the SC serial management port, you will not see system messages. The display disappears after about 60 seconds.

2. Turn on the terminal or terminal emulator, if it is not already turned on.
3. Connect the input power cables to Power Supply 0 and Power Supply 1, and watch the terminal for system messages.

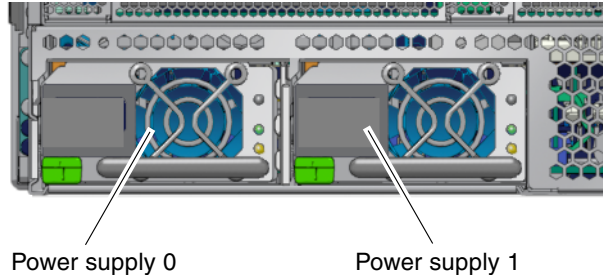


FIGURE 6-1 Rear Panel Power Connectors

After the system controller boots, the system controller login prompt is displayed on the serial console. The following example shows partial output from the system controller boot sequence leading to the login prompt.

CODE EXAMPLE 6-1 Sample System Controller Output

```
ALOM POST 1.0

Dual Port Memory Test, PASSED.
```

CODE EXAMPLE 6-1 Sample System Controller Output (*Continued*)

```
TTY External - Internal Loopback Test
      TTY External - Internal Loopback Test, PASSED.

TTYC - Internal Loopback Test
      TTYC - Internal Loopback Test, PASSED.

TTYD - Internal Loopback Test
      TTYD - Internal Loopback Test, PASSED.

.....

Full VxDiag Tests - PASSED


      Status summary - Status = 7FFF


      VxDiag      -      - PASSED
      POST        -      - PASSED
      LOOPBACK    -      - PASSED


      I2C          -      - PASSED
      EPROM        -      - PASSED
      FRU PROM     -      - PASSED


      ETHERNET     -      - PASSED
      MAIN CRC     -      - PASSED
      BOOT CRC     -      - PASSED


      TTYD         -      - PASSED
      TTYC         -      - PASSED
      MEMORY       -      - PASSED
      MPC885       -      - PASSED


Please login:
```

Enabling the System Controller Network Management Port

The system controller network management port is not operational until you configure network settings for the system controller. Configure the system controller in this order:

1. After the system controller boots, access the ALOM command line interface through the serial management port. See [“To Log Into the System Controller Using the Serial Management Port”](#) on page 80.
2. Configure the system controller. See [“To Configure the System Controller Network Management Port”](#) on page 81.
3. Enable the new values by resetting the system controller. See [“To Reset the System Controller”](#) on page 84.

You can now use the SP network management port at any time to access the system controller. See [“To Log Into the System Controller Using the Network Management Port”](#) on page 85.

Logging Into the System Controller

If you are powering on the server for the first time after installation, use the system controller serial port to power on the server and run POST. See [“To Log Into the System Controller Using the Serial Management Port”](#) on page 80.

If the network management port has already been configured, you can use it instead of the serial management port. See [“To Log Into the System Controller Using the Network Management Port”](#) on page 85.

▼ To Log Into the System Controller Using the Serial Management Port

After the system controller boots, you can access the ALOM command-line interface to configure and manage the server.

The `sc` prompt is displayed the first time the system controller is booted. The default configuration provides an ALOM user account called `admin`. There is no default password, so you must create a password using the system controller (`sc`) `password` command.

1. **If this is the first time the server has been powered on, use the `password` command to set the `admin` password.**

```
.....
TTYD - - PASSED
TTYC - - PASSED
MEMORY - - PASSED
MPC885 - - PASSED
sc> password
password: Changing password for admin
Setting password for admin.
New password: new-password

Re-enter new password: new-password

sc>
```

After the `admin` password has been set, on subsequent reboots, the `sc` login prompt is displayed.

2. **Enter `admin` for the login name followed by your password.**

```
TTYD - - PASSED
TTYC - - PASSED
MEMORY - - PASSED
MPC885 - - PASSED
Please login: admin
Please Enter password: password
(Press Return twice)

sc>
```

▼ To Configure the System Controller Network Management Port

To access the system controller using the network for the first time, you must first configure the SC network management port through the SC serial management port.

Set these network parameters according to the specific details of your network configuration:

- `netsc_ipnetmask` – Netmask for the system controller subnet
- `netsc_ipaddr` – IP address of the system controller
- `netsc_ipgateway` – IP address of the gateway for the subnet
- `if_network` – Specifies whether the SC is on the network or not

To configure these parameters you must use the `setsc` command. The usage is:

`setsc parameter`

1. Set the netmask for the system controller.

```
sc> setsc netsc_ipnetmask 255.255.255.0
```

This example uses `255.255.255.0` to set the netmask. Your network environment subnet might require a different netmask. Use a netmask number most appropriate to your environment.

2. Set the IP address for the system controller.

```
sc> setsc netsc_ipaddr service-processor-IPAddr
```

3. Set the IP address for the system controller gateway.

```
sc> setsc netsc_ipgateway gateway-IPAddr
```

4. Set the `if_network` parameter to `true`.

```
sc> setsc if_network true
```

5. Use the `showsc` command to verify that the parameters were set correctly.

The `showsc` command displays all the configuration parameters and their values, as listed in [TABLE 6-1](#).

Note – The highlighted parameters must be set according to the specific details of your network configuration for the network management port to function properly.

TABLE 6-1 Sample Configuration Parameter Setting

Parameter	Sample Value
netsc_enetaddr	00:03:ba_81:2d_02
if_network	true
if_modem	false
if_emailalerts	false
sys_autorestart	xir
sys_xirtimeout	900
netsc_tpelinktest	true
netsc_dhcp	false
netsc_ipaddr	129.148.40.30
netsc_ipnetmask	255.255.255.0
netsc_ipgateway	129.148.40.254
mgt_mailhost	
mgt_mailalert	
sc_customerinfo	
sc_escapechars	#.
sc_powerondelay	false
sc_powerstatememory	false
sc_clipasswdecho	true
sc_cliprompt	sc
sc_clitimeout	0
sc_clieventlevel	2
sc_backupuserdata	true
sys_eventlevel	2
sys_confighost	wgs40-80
sys_configip	129.148.40.80
ser_baudrate	9600
ser_parity	none

TABLE 6-1 Sample Configuration Parameter Setting (*Continued*)

Parameter	Sample Value
ser_stopbits	1
ser_data	8
netsc_enetaddr	00:03:ba:81:2d:02
sys_hostname	
sys_enetaddr	00:03:ba:81:2c:f9

▼ To Reset the System Controller

After all of the configuration parameters are set, you must reset the system controller for the new values to take affect.

- **Issue the `resetsc` command.**

You are prompted to confirm that you want to reset the system controller. Reply **y** when prompted.

```
SC> resetsc
Are you sure you want to reset the SC [y/n]? y
User Requested SC Shutdown
```

Note – You can specify the `-y` flag to the `resetsc` command and bypass the confirmation message.

The system controller resets, runs diagnostics, and returns to the login prompt.

```
ALOM POST 1.0

Dual Port Memory Test, PASSED.

TTY External - Internal Loopback Test
      TTY External - Internal Loopback Test, PASSED.

TTYC - Internal Loopback Test
      TTYC - Internal Loopback Test, PASSED.

TTYD - Internal Loopback Test
      TTYD - Internal Loopback Test, PASSED.
```


.....

Full VxDiag Tests - PASSED

Status summary - Status = 7FFF

VxDiag	-	-	PASSED
POST	-	-	PASSED
LOOPBACK	-	-	PASSED
I2C	-	-	PASSED
EPROM	-	-	PASSED
FRU PROM	-	-	PASSED
ETHERNET	-	-	PASSED
MAIN CRC	-	-	PASSED
BOOT CRC	-	-	PASSED
TTYD	-	-	PASSED
TTYC	-	-	PASSED
MEMORY	-	-	PASSED
MPC885	-	-	PASSED

Please login:

▼ To Log Into the System Controller Using the Network Management Port

Note – You must configure the system controller parameters shown in [“To Configure the System Controller Network Management Port”](#) on page 81 before you can use the network management port.

1. Open a Telnet session and connect to the system controller by specifying the controller's network address.

```
% telnet 129.148.40.30
Trying 129.148.40.30...
Connected to 129.148.40.30.
Escape character is '^]'.
Copyright 2003 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
Sun(tm) Advanced Lights Out Manager 1.0.11 ()
Please login:
```

2. Login as admin using the password you previously set.

```
Please login: admin
Please Enter password: password
sc>
```

Using the System Controller for Common Operations

▼ To Power On the Server

Powering on the server requires you to use the `poweron` command at the SC console.

- To initiate the power-on sequence, issue the `poweron` command.

You see an `sc>` alert message on the system console. This message indicates that the server has reset.

```
sc> poweron
SC Alert: Host System has Reset
sc>
```

▼ To Connect to the System Console

Output from POST, OpenBoot, and the Solaris OS is displayed in the system console using the network console on the system controller.

- **Execute the `console` command, and use the `-f` option to force the console to be attached to your session.**

Multiple users can be connected to the console, but only one can be attached.

```
sc> console -f
Enter #. to return to ALOM.
```

▼ To Perform a Normal Server Initialization

- **Execute the `poweron` command.**

The CPU and memory controllers initialize and eventually OpenBoot initializes. After a number of system messages, you see the ok prompt.

The following example is a small section of the complete output.

```
Find dropin, Copying Done, Size 0000.0000.0000.1110
Find dropin, (copied), Decompressing Done, Size
0000.0000.0006.06e0 ^Qcpu cpu cpu cpu cpu cpu cpu cpu cpu cpu
cpu cpu cpu cpu cpu cpu cpu cpu cpu cpu cpu cpu cpu cpu
cpu vpci mem32base, mem64base, cfgbase: e800000000 e000000000
e900000000
pci /pci@780: Device 0 pci pci
/pci@780/pci@0: Device 0 Nothing there
/pci@780/pci@0: Device 1 pci pci

.....

/pci@7c0/pci@0: Device a Nothing there
/pci@7c0/pci@0: Device b Nothing there
/pci@7c0/pci@0: Device c Nothing there
/pci@7c0/pci@0: Device d Nothing there
/pci@7c0/pci@0: Device e Nothing there
/pci@7c0/pci@0: Device f Nothing there
Probing I/O buses

Sun Fire T200, No Keyboard
```

```

Copyright 1998-2004 Sun Microsystems, Inc. All rights reserved.
OpenBoot Ontario FW build_11***PROTOTYPE_BUILD***, 16376 MB memory
installed, Serial #51454515.
[firmware obp4.x #0]
Ethernet address 0:3:ba:ce:a1:3d, Host ID: 83112233.

{0} ok

```

To understand the various devices and their path names as represented in the OpenBoot device tree, refer to [TABLE 6-2](#). The table identifies each of the devices, their full path name, and their location or NAC name used to identify their physical location.

TABLE 6-2 Map of Devices, OpenBoot Path Names, and Locations

OpenBoot Device Path Name	Device	Location Name
/pci@780	Fire I/O Bridge Bus A	IOBD/PCIEa
/pci@780/pci@0	PLX 8532 PCI-E Switch A (U0901)	IOBD/PCI-SWITCH0
/pci@780/pci@0/pci@1	Intel Ophir GBE Chip (U2401)	IOBD/GBE0
/pci@780/pci@0/pci@8	PCI-E Slot 0 (J2100)	PCIE0
/pci@780/pci@0/pci@9	LSI 1064-E SAS Controller (U3401)	IOBD/SASHBA
/pci@7c0	Fire I/O Bridge Bus B	IOBD/PCIEb
/pci@7c0/pci@0	PLX 8532 PCI-E Switch B (U1501)	IOBD/PCI-SWITCH1
/pci@7c0/pci@0/pci@1	Intel Ophir GBE Chip (U2601)	IOBD/GBE1
/pci@7c0/pci@0/pci@2	Intel 41210 Bridge Chip (U2901)	IOBD/PCI-BRIDGE
/pci@7c0/pci@0/pci@2/pci@0	PCI-X Slot 0 (J3201)	PCIX0
/pci@7c0/pci@0/pci@2/pci@0	PCI-X Slot 1 (J3301)	PCIX1
/pci@7c0/pci@0/pci@2/pci@0,2	ULI Southbridge Chip (U3702)	IOBD/PCIX-IO
/pci@7c0/pci@0/pci@8	PCI-E Slot 2 (J2202)	PCIE2
/pci@7c0/pci@0/pci@9	PCI-E Slot 1 (J2201)	PCIE1

Booting the Solaris Operating System

The Solaris OS is preinstalled on the drive in slot 0. The Solaris OS is not configured (that is, the `sys-unconfig` command was run in the factory). If you boot the server from this disk, you will be prompted to configure the Solaris OS for your environment.

▼ To Boot the Solaris Operating System

1. At the `ok` prompt, boot from the disk that contains the Solaris OS.
 - If you know which disk to boot from, go to [Step 2](#).
 - If you need to determine which disk to boot from, issue the `show-disks` command at the `ok` prompt to see the path to the configured disks.

```
ok show-disks
a) /pci@7c0/pci@0/pci@2/pci@0,2/LSILogic,sas@4/disk
q) NO SELECTION
Enter Selection, q to quit: q
ok
```

2. Type the boot command at the `ok` prompt.

Use the value from [Step 1](#) to construct the boot command. You need to append the target to the disk path. In the following example, the server is being booted from disk 0 (zero), so `@0,0` is appended to the disk path.

```
ok boot / pci@7c0/pci@0/pci@2/pci@0,2/LSILogic,sas@4/disk@0,0
Boot device: / pci@7c0/pci@0/pci@2/pci@0,2/LSILogic,sas@4/
disk@0,0
File and args:
Notice: Unimplemented procedure 'encode-unit' in
/pci@7c0/pci@0/pci@2/pci@0/LSILogic,sas@4
Loading ufs-file-system package 1.4 04 Aug 1995 13:02:54.
FCode UFS Reader 1.12 00/07/17 15:48:16.
Loading: /platform/SUNW,Ontario/ufsboot
Loading: /platform/sun4v/ufsboot
SunOS Release 5.10 Version
/net/spa/export/spa2/ws/pothier/grlks10-ontario:12/01/2004 64-bit
Copyright 1983-2004 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

```
DEBUG enabled
misc/forthdebug (159760 bytes) loaded
/platform/sun4v/kernel/drv/sparcv9/px symbol
intr_devino_to_sysino multiply defined
...
os-tba FPU not in use
configuring IPv4 interfaces: ipge0.
Hostname: wgs94-181
The system is coming up. Please wait.
NIS domain name is Ecd.East.Sun.COM
starting rpc services: rpcbind keyserver ypbind done.
Setting netmask of lo0 to 255.0.0.0
Setting netmask of bge0 to 255.255.255.0
Setting default IPv4 interface for multicast: add net 224.0/4:
gateway wgs94-181
syslog service starting.
volume management starting.
Creating new rsa public/private host key pair
Creating new dsa public/private host key pair
The system is ready.
wgs94-181 console login:
```

▼ To Reset the Server

- If it is necessary to reset the server, use the `uadmin` command.

```
# uadmin 2 1
```

To simply reset the server, it is not necessary to power the server off and on.

▼ To Power Cycle the Server

If a simple reset does not clear a server problem, you can power the server off and on with this procedure.

1. Shut down the Solaris OS.

At the Solaris OS prompt, issue the `uadmin` command to halt the Solaris OS and to return to the `ok` prompt.

```
# uadmin 2 0
WARNING: proc_exit: init exited
syncing file systems... done
Program terminated
ok
```

2. Switch from the system console prompt to the SC console prompt by issuing the `#. escape` sequence.

```
ok #.
sc>
```

3. Using the SC console, issue the `poweroff` command.

```
sc> poweroff -fy
SC Alert: SC Request to Power Off Host Immediately.
```

4. Issue the `poweron` command.

```
sc> poweron
sc> SC Alert: Host System has Reset
```

5. Reconnect to the system console using the `console` command.

```
sc> console -f
Enter #. to return to ALOM.
```

The server displays various messages, followed by the `ok` prompt.

Software Configuration Worksheet

Use the following worksheet to gather the information that you need to configure software on the server. You do not need to gather all of the information that is requested on the worksheet. You only need to collect the information that applies to your server.

TABLE A-1 Server Software Configuration Worksheet

Information Needed to Install	Description/Example	Your Answers
Network	Is the server connected to a network?	Yes/No
DHCP	Can the server use Dynamic Host Configuration Protocol (DHCP) to configure its network interfaces?	Yes/No
Host Name	Host name that you choose for the server.	
IP Address	If you are not using DHCP, supply the IP address for the server. Example: 129.200.9.1	
Subnet	If you are not using DHCP, is the server part of a subnet? If yes, what is the netmask of the subnet? Example: 255.255.0.0	Yes/No
IPv6	Do you want to enable IPv6 on this machine?	Yes/No
Kerberos	Do you want to configure Kerberos security on this machine? If yes, gather this information: <div>Default Realm: Administration Server: First Kerberos Key Distribution Center (KDC): (Optional) Additional KDCs:</div>	Yes/No
Name Service	Which name service should this server use?	NIS+ /NIS/DNS/LDAP / None

TABLE A-1 Server Software Configuration Worksheet (*Continued*)

Information Needed to Install	Description/Example	Your Answers
Domain Name	If the server uses a name service, supply the name of the domain in which the server resides.	
NIS+ and NIS	Do you want to specify a name server or let the installation program find one? If you want to specify a name server, provide the following information: Server's Host Name: Server's IP address:	Specify one/Find one
DNS	Provide IP addresses for the DNS server. You must enter at least one IP address, but you can enter up to three addresses. Server's IP Address(es): You can enter a list of domains to search when a DNS query is made: Search Domain: Search Domain: Search Domain:	
LDAP	Provide the following information about your LDAP profile: Profile Name: Profile Server: IP Address:	
Default Router	Do you want to specify a default IP router (gateway) or let the Solaris Web Start installation program find one? If you want to specify a default router, provide the following information: Router IP Address:	Specify one/Find one
Time Zone	How do you want to specify your default time zone?	Geographic region Offset from GMT Time zone file
Locales	For which geographic regions do you want to install support?	
Power Management	Do you want to use Power Management?	Yes/No
Proxy Server Configuration (Only available in the Solaris Web Start program)	Do you have a direct connection to the Internet or do you need to use a proxy server to gain access to the Internet? If you use a proxy server, provide the following information: Host: Port:	Direct connection/Proxy server

TABLE A-1 Server Software Configuration Worksheet (*Continued*)

Information Needed to Install	Description/Example	Your Answers
Automatic Reboot or CD/DVD Ejection	Reboot automatically after software installation? Eject CD/DVD automatically after software installation?	Yes/No Yes/No
Software Group	Which Solaris group do you want to install?	Entire plus OEM Entire Developer End user Core
Custom Package Selection	Do you want to add or remove software packages from the Solaris Software Group that you install? <i>Note - When you select which packages to add or remove, you need to know about software dependencies and how Solaris software is packaged.</i>	
64-bit	Do you want to install support for 64-bit applications?	Yes/No
Select Disks	On which disks do you want to install the Solaris software? Example: c0t0d0	
Preserver Data	Do you want to preserve any data that exists on the disks where you are installing the Solaris software?	Yes/No
Auto-layout File Systems	Do you want the installation program to lay out file systems on your disks automatically? If yes, which file systems should be used for auto-layout? Example: / , /opt , /var If no, you must provide file system configuration information.	Yes/No
Mount Remote File Systems (only available in the Solaris SunInstall™ program)	Does this server need to access software on another file system? If yes, provide the following information about the remote file system. Server: IP Address: Remote File System: Local Mount Point:	Yes/No

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